

# ALL THE YEAR ROUND.

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## HALF A MILLION OF MONEY.

BY THE AUTHOR OF "BARBARA'S HISTORY."

### CHAPTER XXXIII. THE RIFLE MATCH.

At half-past two, an open carriage drove up to the ground, and four ladies alighted. They were received by Lord Castletowers, handed to their seats, and presented with written programmes of the games. Miss Colonna was installed in the central arm-chair, which, being placed a little in advance of the other seats and dignified with a footstool, was styled, magniloquently, the Throne. Scarcely had they taken their places, when two more carriages appeared upon the scene, the first of which contained Lady Arabella Walkingshaw and Miss Hatherton, and the second, Mrs. Cadogan, the wife of the Sedgebrook vicar, and her two daughters. The latter, hearing down in the village what was doing in the park, had come over to see the sports; but Lady Arabella's visit was made in exclusive pursuance of her own little game, and bore no kind of reference to any game that might be set on foot by other people. She was, therefore, rather put out than otherwise when, instead of finding Lady Castletowers at home, she was informed that "my lady was gone across the park to see the gentlemen race, and had left word, if any friends called at the house, that there would be seats for them, if they liked to follow." Miss Hatherton, however, was delighted.

"It's perfectly charming," said she, as they turned down the drive leading to that part of the park indicated by the servant. "You cannot think how pleased I am, Lady Arabella!"

"Well, my dear, then I am pleased too," replied Lady Arabella, benevolently.

"There's nothing I enjoy so much as contests of this kind," Miss Hatherton went on to say. "Boat-races, horse-races, reviews, anything, so long as skill, strength, or speed is in question. Why, I haven't missed a Derby-day for the last five years; and as for the Roman Carnival, the only thing I care for in it is the horse-race. I'm always sorry the Jews don't run instead. It would be so much more amusing."

"You droll creature!" said Lady Arabella, with a faint smile. "I wonder if Mr. Trefalden will take part in these games?"

"Of course he will—and win all before him. He's as fleet as a chamois, depend on it."

"I hope they won't fire," said Lady Arabella, with a little lady-like shudder.

"And I hope, above all things, that they will. But then, you know, dear Lady Arabella, I have no nerves. Why, this is delightful—there's quite a crowd!"

And so there was. News is contagious, and propagates itself as mysteriously as the potato disease. The whole neighbourhood had already heard, somehow or another, of what was doing at the park; and every farmer, gamekeeper, and idle fellow about the place, was on the ground long before the hour appointed. As for the women and children, nothing short of Polygamy could account for their numbers.

"Lady Arabella Walkingshaw and Miss Hatherton!" said Lord Castletowers, hastening to the carriage door as they drove up. "This is indeed a happy accident. You have been to the house, I suppose, to call upon my mother."

"We have; but with no idea that we were coming to a—*a fête* of this kind," replied Lady Arabella, somewhat at a loss for the most appropriate word, and exchanging bows and gracious smiles with the ladies on the platform.

"Why did you not tell us about it last evening, you sly man?" asked Miss Hatherton.

"Because I then knew no more about it than yourself," replied the Earl. "It is an improvisation."

"And what are you going to do?"

"A little of everything—rifle-shooting, leaping, running; but you shall have a programme presently, and if you will alight, I can give you seats beside my mother."

With this he gave his arm to Lady Arabella, and conducted both ladies to the place of honour.

"But where are the competitors?" said Miss Hatherton, when the due greetings had been exchanged, and they had taken their seats; "and above all, where's my friend, the noble savage?"

"Trefalden? Oh, he's in our tent, out yonder. This affair was his idea entirely."

"And an admirable idea too. But he'll beat you, you know."

"He would, if he came forward," replied the Earl; "but he declines to compete."

"Declines to compete!" echoed the heiress.

"Yes—for everything except the last race—and that we all go in for."

"I never heard of such a thing!" exclaimed Miss Hatherton, indignantly. "Why, it's as if

the favourite was withdrawn at the last moment from the Derby—and I, too, who had intended to back him to any extent! I declare I was never more disappointed in my life. What's his motive?"

"He said he was out of practice," replied Castletowers, hesitatingly.

"Nonsense. That wasn't his real motive. He knew nobody else would have a chance, and he was too generous to carry off all the honours."

"Do you really think so?" said Miss Colonna, suddenly. She had listened to the conversation till now, without taking part in it.

"I do, indeed. What does Lord Castletowers say?"

"I say that Miss Hatherton is right; and I *know* her to be right. Trefalden could write his name in bullets on that target, if he chose—but he won't."

Miss Hatherton turned to Miss Colonna in a glow of enthusiasm.

"That's true nobleness!" she exclaimed.

"Indeed it is," said Castletowers. "He's the finest fellow I have ever known, savage or civilised."

But Miss Colonna said nothing.

"I wish you'd bring him this way, Lord Castletowers," said the heiress. "I like talking to him—he amuses me immensely."

"You shall have him by-and-by," laughed the Earl; "but he is our judge in the rifle-matches, and can't be spared at present. Excuse me—another carriage full of ladies. I am master of the ceremonies."

And with this he ran off to receive the Cadogans.

The appointed hour being overpast, the ladies expectant, and the audience considerable, it was decided that they should begin.

Lord Castletowers was seen to cross the course, and enter the cricketing tent at the further end, whence he presently emerged with his cartridge-box belted on, and his rifle in his hand. He was followed by five others, similarly equipped. Saxon Trefalden, in his quality as judge, took up a safe position to the right of the target. Miss Hatherton surveyed them through her opera-glass as they came over the ground and placed themselves about a dozen yards off with their backs to the stand.

"Dear me! they are very near us," said Lady Arabella, with that pretty timidity that is less charming at eight-and-forty than at eighteen. "I hope it is not dangerous."

"Don't be alarmed, my dear friend," said Miss Hatherton. "Gentlemen don't generally fire behind their own backs. So, Major Vaughan begins—and a very good shot, too—very near the bull's eye. Who is that remarkably handsome fair man to the right?"

The question was addressed to Miss Colonna; but it received no reply. Olimpia heard the words, as she heard the report of the first rifle, without attaching any import to the sound, just as her eyes were fixed upon the target, but saw

nothing. She was absorbed in thought—very painful thought, as it would seem, by the strange hard way in which her lips were drawn together, and her fingers were mechanically twisting and tearing the programme which they held.

Miss Hatherton turned to repeat the inquiry; but, seeing the expression on Olimpia's face, remained silent. It was an expression that startled her, and puzzled her as much as it startled her. An expression such as one sees but seldom in the course of an ordinary life; neither wholly resolute, nor hopeless, nor defiant; but a blending, perhaps, of all three, with something else that might have been compunction—or despair.

Curiosity so far prevailed, that for some three or four seconds Miss Hatherton continued to stare at Olimpia instead of watching the competitors, and thus, to her infinite mortification, lost the thread of the firing. Of course, none of the ladies on the platform could help her. They saw the riflemen, and they saw the marks on the target; but not one among them had the dimmest idea of the order in which those marks had been dealt, or of the hands that had bestowed them. The appointed number of rounds, however, having been fired out, the question was set at rest by the announcement that Sir Charles Burgoyne had carried off the first prize. Sir Charles Burgoyne sauntered up accordingly to the front of the platform, and received the cup from Miss Colonna's hand with the best-bred indifference in the world.

"You don't share my passion for these contests, Miss Colonna," said the heiress, in the pause that ensued between the first and second match. The strange look had vanished from Olimpia's face long since; but Miss Hatherton could not forget it—would have given something to fathom it.

"Indeed you mistake. I think them very interesting," replied Olimpia.

"But of course they cannot have so much interest for you as for me. Your sympathies are bound up in a great cause, and you must have fewer small emotions on hand."

"Perhaps," said Olimpia, with a forced smile.

"No bad news from Italy, I hope?"

"The news at present," replied Olimpia, "is neither bad nor good. It is a season of anxious suspense for all whose hearts are in the cause."

"You look anxious," said Miss Hatherton, kindly, but inquisitively. "I thought just now I never saw a face look so anxious as yours. You didn't seem to remark the firing at all."

A crimson tide rushed to Olimpia's face, flooded it, and ebbed away, leaving her paler than before.

"I am quite strong enough," she replied, coldly, "to sustain such cares as fall to my lot."

The competitors for the second rifle-match were now on the ground, and the conversation dropped. There were but four this time—Lord Castletowers, Sir Charles Burgoyne, Major Vaughan, and Lieutenant Torrington. Having five shots each, they fired alternately, one shot at a time, in their order as they stood—Vaughan

first, Torrington second, Castletowers third, and Burgoyne fourth. It became evident, after the first two rounds, that Vaughan, although a good marksman, was inferior to both Castletowers and Burgoyne, and that Torrington was nowhere. Miss Hatherton and Miss Colonna were the only two ladies who could follow the shots, or understand the scoring; and this they did with a degree of interest quite incomprehensible to the rest. As the end drew near, and it became evident that the victory lay between Burgoyne and the Earl, Miss Hatherton's excitement became intense.

"Ten to one on Lord Castletowers," she exclaimed. "See how cool he is! See how steadily he brings up his gun—ten to one, gloves or guineas. . . . Will nobody take me? In the white, I vow, and all but in the very centre! Beat that, Sir Charles, if you can!"

"He will *not* beat it," said Olympia, in a low, earnest voice.

Miss Hatherton glanced at her again; but scarcely for a second. She was too deeply interested in the next shot to care much about anything else just then. But she saw Olympia's parted lips, and the outlooking light in her eyes, and thought of both afterwards.

Up to this point, Lord Castletowers had scored four three times, and three twice, making a total of eighteen. Sir Charles had scored four twice, and three twice, making a total of fourteen. The next shot would be his fifth, and last. If he hit the bull's eye, it would be a drawn game between Castletowers and himself, and they would have to try again for the victory; but if he scored anything less than four, the Earl must win.

There was a moment of suspense. Sir Charles brought up his gun very slowly, took aim twice before he fired, and delivered an excellent shot just *on* the line dividing the bull's eye from the centre ring. He had lost by the sixteenth of an inch.

The spectators round the ropes set up a faint respectful shout in their squire's honour; the non-competitors rushed up to the target; and Saxon, too well pleased to care for the moment whether Burgoyne heard him or not, shook his friend by both hands, exclaiming:

"I am so glad, Castletowers—so heartily glad! I did wish you to win those pistols!"

Olympia's smile was cold and indifferent enough when the Earl presented himself to receive his prize; but Miss Hatherton's sharp eyes saw that her hand trembled.

#### CHAPTER XXXIV. A GUERDON.

THE long jump was jumped, and the hundred yards race was run—Mr. Guy Greville winning the first by four inches, and Major Vaughan the second by four yards. Only the great race remained to be contested. In the mean while, half an hour was allowed for rest and refreshments. The gentlemen thronged to the platform in a mongrel costume compounded of flannel trousers, cricketing-shoes, parti-coloured Jerseys, and overcoats of various descriptions;

so that they looked like cricketing men below and boating men above. Servants glided solemnly about with Madeira and biscuits. The ladies congratulated the victors, and the victors congratulated each other. The spectators outside the ropes strolled about respectfully, and did a little subdued betting among themselves; and the conversation on the platform was broken up into coteries. One of these consisted of Lady Arabella Walkingshaw, Lady Castletowers, and her son.

"Vaughan ran well, didn't he?" said the Earl. "I thought at one moment that Greville would have distanced him; but Vaughan had the most wind, and steady did it."

"You would do well, Gervase, to reserve your sporting phraseology for your male friends," said Lady Castletowers, coldly. "You forget that ladies do not appreciate its full point and vigour."

"I beg your pardon, my dear mother; but it comes so naturally when sport is the topic of conversation," replied her son. "I hope you are amused, Lady Arabella?"

"Oh yes, thank you—when you don't fire."

"There is, at all events, nothing undignified in firing," observed the Countess.

"I hope you do not think our athletic games undignified, mother?" said the Earl.

"For gentlemen, certainly. For boys, or peasants, not at all."

"But a gentleman has as many and as good muscles as a peasant. A gentleman values strength and speed as much, and sometimes more, than he values Greek and Latin; but, like Greek and Latin, strength and speed must be kept up by frequent exercise."

"I have no wish to argue the question," said Lady Castletowers. "It is enough that I set a higher value on skill than force, and that it gives me no gratification to see half a dozen gentlemen racing round a piece of sward for the entertainment of a mob of gamekeepers and ploughmen."

"Nay—for our own entertainment and yours, dearest mother," replied the young man, gently. "We have never yet shut our park gates on these good people; but their presence goes for nothing in what we do to-day."

He spoke very deferentially, but with a faint flush of annoyance on his face, and passed on to where Miss Hatherton was chatting with Saxon Trefalden.

"It will be a long time," she said, "before I can forgive you for my disappointment of this morning. And I know I am right. You could have beaten everybody at everything, if you had pleased. It was an absurd piece of Quixotism, and I am very angry with you for it. There—don't attempt to deny it. Lord Castletowers has confessed, and it is of no use for you to plead not guilty."

"Lord Castletowers never saw me leap a foot or run a yard in his life," said Saxon, emphatically. "He knows nothing of what I can, or cannot do."

"I am here to answer for myself," said the

Earl, laying his hand on his friend's shoulder. "And I *do* know that you can put a bullet through a shifting weathercock at five hundred yards."

"A mere trick!"

"Not so. Skill is no more to be confounded with trickery than pocket-picking with legerdemain. I am of Miss Hatherton's opinion, and am certain you could have beaten us all round if you had chosen to take the trouble."

"You will find out your mistake presently, when you have all left me in the rear," said Saxon, a little impatiently; "I would recommend no one to bet upon me."

"I mean to bet upon you, Mr. Trefalden," said Miss Hatherton.

"Pray don't; you will be sure to lose your money."

"I don't believe it; or if I do, I shall call upon you to pay my debts, for I shall be certain you have lagged behind on purpose."

At this moment one or two of the others came up, and the conversation turned upon the preceding contests.

"Mr. Trefalden," said Miss Colonna, "will you be kind enough to tell me how many times you have to make the circuit of the ground, in this one-mile race?"

Miss Colonna's chair stood next to Miss Hatherton's, but was placed about half a foot in advance, by right of her prerogative. As she turned to address him, Saxon dropped out of the heiress's coterie, and, moving round by the back of her chair, replied:

"Exactly six times, mademoiselle."

"Will you come round to this side, Mr. Trefalden?" said Olimpia, in a low tone; "I have something to say to you."

Not without some vague sense of surprise, the young man passed on behind the second chair, and presented himself at Miss Colonna's left hand.

"You are really going to contest this one-mile race, are you not?" she asked.

"I have entered my name with the rest," replied Saxon.

"Then you mean, of course, to win if you can?"

Saxon looked embarrassed.

"I have entered my name," he said, "but I am not sure that I shall run, for all that. Somebody must act as judge; and I prefer not to race if I can help it."

"But I particularly prefer that you should race, Mr. Trefalden," said Olimpia, dropping her voice to a still lower key; "I want you to win me that purse of twenty guineas for my dear Italy."

"It will be yours, and Italy's, mademoiselle, whoever wins it."

"I know that, Mr. Trefalden."

"Then what difference can it make whether I, or another, carry off the prize?" said Saxon, wonderingly.

"It *does* make a difference," replied Olimpia, lifting her eyes suddenly to his.

Saxon felt fluttered, without knowing why.

"What difference?" faltered he.

"Must I tell you?"

"If—if you please."

"Will you promise to win for me, if I do tell you?"

"I don't know—I will try."

"I ask no more than that. If you really try, I am confident of victory. Well then, I want you to win because—I suppose, because I am a woman; and all women are capricious."

Saxon looked puzzled.

"I don't think you are capricious," he said.

"Do you not? Then I am afraid that is because you are a man; and all men are vain. There is a pair of maxims for you."

"Maxims for which I can discover no application," replied Saxon, laughingly. "Why should I be accused of vanity because I refuse to believe that Mademoiselle Colonna is guilty of caprice?"

"I am afraid you are very dull to-day, Mr. Trefalden,—or very subtle."

"I know I am not subtle," said Saxon; "but I must be dreadfully dull."

"If your feet do not outstrip your apprehension, you will scarcely win the cup. What bell is that?"

"It's the signal for assembling," replied Saxon; "I must go now; and you have not told me, after all."

"But you have promised me that you will try."

"No, no—my promise was conditional on your explanation."

"But have I not told you that women are capricious?"

"What of that?"

"We sometimes value a cowslip from one hand more than a rose from another; and—perhaps I am so capricious as to prefer the Italian prize from yours. Hark! there is the second bell! Now, go; and bring me back the purse."

The tone in which this was said—the gesture, half persuasive, half imperious—the dazzling smile by which it was accompanied, were more than enough to turn an older head than Saxon Trefalden's. He stammered something, he scarcely knew what; and his heart leaped, he scarcely knew why.

"If you do not go at once," said Miss Colonna, "you will be too late. Shall I give you my glove for a favour? Be a true knight, and deserve it."

Breathless, intoxicated, the young man pressed the glove furtively to his lips, thrust it into his bosom, leaped down upon the course, and flew to take his place among the runners. He felt as if his feet were clad in the winged sandals of Hermes; as if his head touched the clouds, and the very air were sunshine. It was delightful, this sense of exaltation and rapture—and quite new.

Not so, however, felt Olimpia Colonna. Saxon had no sooner leaped from the platform, than the colour died out suddenly from her face, and the smile from her lips. She leaned back in her chair with a look of intense pain and



weariness, and sighed heavily. There were three persons observing her; but her thoughts were very bitter at that moment, and she was quite unconscious of their scrutiny. Those persons were Lady Castletowers; Signor Colonna, who had but just arrived, and was leaning on the back of her chair; and Miss Hatherton—and neither the look of pain, nor the sigh, was lost on either of them.

### HEAT AND WORK.\*

IN his treatise, Heat considered as a mode of Motion, Professor Tyndall shows that heat is expended whenever work is done. After demonstrating by experiment that, where mechanical force is expended, heat is produced, he brings before us the converse experiment, and shows us the *consumption* of heat in mechanical work.

He exhibits to his audience a strong vessel filled with compressed air. It has been so compressed for some hours, in order that the temperature of the air within the vessel may be the same as that of the air in the room without. At that moment, then, the inner air was pressing against the sides of the vessel; and, if he opened the tap, a portion of the air would rush violently out of the vessel. The word "rush," however, but vaguely expresses the true state of things. The air which issues, is driven out by the air behind it; this latter accomplishes the work of urging forward the stream of air. And what will be the condition of the *working air* during this process? It will be chilled. It performs mechanical work; and the only agent it can call upon to perform it, is the heat which it possesses, and to which the elastic force with which it presses against the sides of the vessel, is entirely due. A portion of this heat will be consumed, and the air will be chilled. It is so, on carrying out the experiment. The tap is turned, and the current of air from the vessel is allowed to strike against the face of the thermo-electric pile—the most delicate and demonstrative of thermometers. The magnetic needle instantly responds, declaring that the pile has been *chilled* by the current of air.

The effect is different when air is urged from the nozzle of a common bellows against the pile. In the last experiment, the mechanical work of urging the air forward was performed by the air itself, and a portion of its heat was consumed in the effort. In the case of the bellows, it is the experimenter's muscles which perform the work. He raises the upper board of the bellows, and the air rushes in; he presses the boards with a certain force, and the air rushes out. The expelled air, striking the face of the pile, has its motion stopped; and an amount of heat equivalent to the destruction of this motion is instantly generated. When a current of air is directed with the bellows against the pile, the motion of the needle shows that the face of the pile has, in this instance, been *warmed* by the air.

Again: to prove the chilling effect of work

done, even by so slightly-built a labourer as gas, the Professor takes a bottle of soda-water, which is shown to be a trifle warmer than the pile. He cuts the string which holds the cork, and it is driven out by the elastic force of the carbonic acid gas. The gas performs work; in so doing, it consumes heat; and the deflection of the needle produced by the bottle shows that it has become colder. A simple detail of daily life, an operation with which every child is familiar, allows the lecturer to illustrate principles from which all material phenomena flow. That it is not the expansion, but the work, which produces the chill, is proved by allowing compressed air, from one vessel, to pass into another from which the air has been exhausted. No work having to be done, there is no change of temperature. Mere rarefaction, therefore, is not of itself sufficient to produce a lowering of the mean temperature of a mass of air. It was, and still is, a current notion that the mere expansion of a gas produces refrigeration, no matter *how* that expansion may be effected. The coldness of the higher atmospheric regions was accounted for by reference to the expansion of the air. But the refrigeration which accompanies expansion is really due to the consumption of heat in the performance of work. Where no work is performed, there is no absolute refrigeration. The simple experiment of allowing a leaden ball to fall from the ceiling to the floor, shows that heat is generated by the sudden stoppage of the motion. This affords an opportunity of telling how the "mechanical equivalent" of heat has been calculated.

It is found that the quantity of heat which would raise one pound of water one degree Fahrenheit in temperature, is exactly equal to what would be generated if a pound weight, after having fallen through a height of seven hundred and seventy-two feet, had its moving force destroyed by collision with the earth. Conversely, the amount of heat necessary to raise a pound of water one degree in temperature, would, if all applied mechanically, be competent to raise a pound weight seven hundred and seventy-two feet high; or, it would raise seven hundred and seventy-two pounds, one foot high. The term "foot-pound" has therefore been introduced to express in a convenient way the lifting of one pound to the height of a foot. Thus, the quantity of heat necessary to raise the temperature of a pound of water one degree Fahrenheit being taken as a standard, seven hundred and seventy-two foot-pounds constitute what is called the *mechanical equivalent* of heat.

For every stroke of work done by the steam-engine, for every pound that it lifts, and for every wheel that it sets in motion, an equivalent quantity of heat disappears. A ton of coal furnishes by its combustion a certain definite amount of heat. Let this quantity of coal be applied to work a steam-engine; and let all the heat communicated to the machine and the condenser, and all the heat lost by radiation and by contact with the air, be collected; it will fall short of the quantity produced by the simple

\* See IS HEAT MOTION? page 534 in the last volume.

combustion of the ton of coal, by an amount exactly equivalent to the work performed. Suppose that work to consist in lifting a weight of seven thousand seven hundred and twenty pounds a foot high; the heat produced by the coal would fall short of its maximum by a quantity just sufficient to warm a pound of water ten degrees Fahrenheit. In an elaborate series of experiments, executed with extraordinary assiduity and on a grand scale by M. Hirn, a civil engineer at Colmar, this theoretic deduction has been reduced to fact.

In earthly, and we may add in planetary, affairs, the sun is the great worker who keeps the whole business of life and action going. It has been asserted that there is no life in certain planets. A few years ago, Dr. Whewell wrote a book to prove that the more distant planets of our system are uninhabitable. Applying the law of inverse squares to their distances from the sun, the diminution of temperature was found to be so great as to preclude the possibility of human life in the more remote members of the solar system. But—not to mention the hazardous task of attempting to prove a negative—the influence of an atmospheric envelope was overlooked in those calculations. The omission vitiates the whole argument. It is perfectly possible to find an atmosphere which would act the part of a *barb* to the solar rays, permitting their entrance towards the planet, but preventing their withdrawal. For example, Professor Tyndall tells us, a layer of air only two inches in thickness, and saturated with the vapour of sulphuric ether, would offer very little resistance to the passage of the solar rays, but would cut off fully thirty-five per cent of the planetary radiation. It would require no inordinate thickening of the layer of vapour to double this absorption; and it is evident that, with a protecting envelope which permits heat to enter but prevents its escape, a comfortable temperature might be obtained on the surface of our most distant planet.

It is the presence of a protective atmosphere that renders the earth itself habitable; and in regions where it is so modified by the absence of aqueous vapour as to lose its protective power, man cannot live. One cause of the coldness of high mountain-tops, is their being lifted beyond the protection of the layer of moist air which lies close to the earth. The withdrawal of sunshine from any region over which the atmosphere is dry, must be followed by quick refrigeration. The moon would be rendered entirely uninhabitable by beings like ourselves, through the operation of this single cause. With a radiation uninterrupted by aqueous vapour, the difference between her monthly maxima and minima of temperature must be enormous. The winters of Thibet are almost unendurable, from the same cause. Humboldt dwelt upon the "frigorific power" of the central portions of the Asiatic continent, and controverted the idea that it was to be explained by reference to their elevation; there being vast expanses of country, not much above

the sea level, with an exceedingly low temperature. He did not seem to be aware of this one most important cause which contributes to the observed result. The absence of the sun at night causes powerful refrigeration when the air is dry. The removal, for a single summer night, of the aqueous vapour from the atmosphere which covers England, would be attended by the destruction of every plant which a freezing temperature could kill. In Sahara, where "the soil is fire and the wind is flame," the refrigeration at night is often painful to bear. Ice has been formed in this region at night. In Australia also, the diurnal range of temperature is very great, amounting, commonly, to between forty and fifty degrees. In short, it may be safely predicted that, wherever the air is dry, the daily thermometric range will be great. This, however, is quite different from saying that where the air is clear, the thermometric range will be great. Great clearness as to light is perfectly compatible with great opacity as to heat. The atmosphere may be charged with aqueous vapour, while a deep blue sky is overhead; and on such occasions the terrestrial radiation would, notwithstanding the "clearness," be intercepted. It is consequently impossible for any one on earth to be sure that the distant planets are uninhabitable, and that the sun cannot be to them, as to us, a vivifier as well as a worker.

Years ago, Sir John Herschel wrote: "The sun's rays are the ultimate source of almost every motion which takes place on the surface of the earth. By its heat are produced all winds, and those disturbances in the electrical equilibrium of the atmosphere which give rise to the phenomena of lightning, and probably also to terrestrial magnetism and the Aurora. By their vivifying action vegetables are enabled to draw support from inorganic matter, and become in their turn the support of animals and man, and the source of those deposits of dynamical efficiency which are laid up for human use in our coal strata. By them the waters of the sea are made to circulate in vapour through the air, and irrigate the land, producing springs and rivers. By them are produced all disturbances of the chemical equilibrium of the elements of nature; which, by a series of compositions and decompositions, originate new products and a transfer of materials."

Professor Tyndall applies the new philosophy to illustrate and expand Herschel's proposition. He reminds us that late discoveries have taught that winds and rivers have their definite thermal values; and that, in order to produce their motion, an equivalent amount of solar heat has been consumed. While they exist as *winds* and *rivers*, the heat expended in producing them has ceased to exist as heat, being converted into mechanical motion; but when that motion is arrested, the heat which produced it is restored. A river, in descending from an elevation of seven thousand seven hundred and twenty feet, generates an amount of heat competent to augment its own temperature ten degrees Fahrenheit. This amount of heat has been ab-

stracted from the sun, in order to lift the matter of the river to the elevation from which it falls.

As long as the river continues on the heights, whether in the solid form as a glacier, or in the liquid form as a lake, the heat expended by the sun in lifting it has disappeared from the universe. It has been consumed in the act of lifting. But, at the moment when the river starts upon its downward course, and encounters the resistance of its bed, the heat expended in its elevation begins to be restored.

The mental eye can follow the emission of heat from its source, the sun, through the ether, as vibratory motion, to the ocean, where it ceases to be *vibration*, taking "the potential form" among the molecules of aqueous vapour; and also to the mountain-top, where the heat absorbed in vaporisation is given out in condensation, while that expended by the sun in *lifting* the water to that elevation is still unrestored. This we find paid back, to the last unit, by the friction along the river's bed; at the bottom of the cascades where the plunge of the torrent is suddenly arrested; in the warmth of the machinery turned by the river; in the spark from the millstone; beneath the crusher of the miner; in the Alpine saw-mill; in the milk-churn of the chalet; in the supports of the cradle rocking the mountaineer's baby to sleep by water-power. All these forms of mechanical motion are simply the parcelling out of an amount of calorific motion derived originally from the sun. At each point at which the mechanical motion is destroyed or diminished, it is the sun's heat which is restored.

There are other motions and other energies whose relations are not so obvious. Trees and vegetables grow upon the earth; when burned they give rise to heat, from which immense quantities of mechanical energy are derived. What is the source of this energy?

To answer the question, Professor Tyndall shows his audience (or his readers) some iron rust, which they can plainly see, produced by the falling together of the atoms of iron and oxygen, and also some transparent carbonic acid gas, which they cannot see, formed by the union of carbon and oxygen. The atoms, thus respectively united, resemble a weight that has fallen from a height and is lying on the ground. But exactly as the weight can be wound up again and prepared for another fall, even so those atoms can be wound up, separated from each other, and enabled to repeat the process of combination. In the building up of plants, carbonic acid is the material from which the carbon of the plant is derived, while water is the substance from which it obtains its hydrogen. The solar beam winds up the weight; it is the agent which severs the atoms, setting the oxygen free, and allowing the carbon and the hydrogen to aggregate in woody fibre. It is at the expense of the solar light that the chemical decomposition takes place. Without the sun, the reduction of the carbonic acid and water cannot be effected; and, in this act, an amount of solar energy is consumed, exactly equivalent to the molecular work done.

If the sun's rays fall upon a surface of sand, the sand is heated, and finally radiates away as much heat as it receives. But let the same beams fall upon a forest; the quantity of heat then given back is less than that received, for a portion of the sunbeams is invested in the building of the trees. It is not the shade alone which renders the forest cool; heat is absorbed and appropriated, as well as intercepted by the leaves and branches as they grow.

Combustion is the reversal of this process; and all the energy invested in a plant reappears as heat when the plant is burned. Ignite a bit of cotton; it bursts into flame. The oxygen again unites with its carbon, and an amount of heat is given out, equal to that originally sacrificed by the sun to form the bit of cotton. So also as regards the "deposits of dynamical efficiency" laid up in our coal strata; they are simply the sun's rays in a "potential form." We dig from our pits, annually, eighty-four millions of tons of coal, the mechanical equivalent of which, is of almost fabulous vastness. The combustion of a single pound of coal in one minute, is equal to the work of three hundred horses for the same time. It would require one hundred and eight millions of horses, working day and night with unimpaired strength for a year, to perform an amount of work equivalent to the energy which the sun of the Carboniferous epoch invested in one year's produce of our coal-pits. Dean Swift made an egregious blunder when he ridiculed the philosopher of the Flying Island who searched for the sunbeams hidden in cucumbers.

The further we pursue this subject, the Professor here remarks, the more its interest and wonder grow upon us. He had already shown how a sun may be produced by the mere exercise of gravitating force; that, by the collision of cold dark planetary masses, the light and heat of our central orb, and also of the fixed stars, may be obtained. But here we find the physical powers, derived or derivable from the action of gravity upon dead matter, introducing themselves at the root of the question of vitality. We find in solar light and heat, the very main-spring of vegetable life. Nor can we halt at the vegetable world; for the sun, mediately or immediately, is the source of all animal life. Some animals feed directly on plants, others feed on their herbivorous fellow-creatures; but all in the long run derive life and energy from the vegetable world; all, therefore, as Helmholtz has remarked, may trace their lineage to the sun. In the animal body, the carbon and hydrogen of the vegetable are again brought into contact with the oxygen from which they had been divorced, and which is now supplied by the lungs. Reunion takes place, and animal heat is the result. Save as regards intensity, there is no difference between the combustion that thus goes on within us, and that of an ordinary fire. The products of combustion are in both cases the same carbonic acid and water.

Looking then at the physics of the question, we see that the formation of a vegetable is a pro-

cess of winding up, while the formation of an animal is a process of running down. This is the rhythm of nature as applied to animal and vegetable life. Plants are the economisers, animals are the spendthrifts, of vital energy derived from the sun.

Measured by human standards, writes Dr. Mayer, the sun is an inexhaustible source of physical energy. This is the continually wound-up spring which is the cause of all terrestrial activity. The vast amount of force sent by the earth into space in the form of wave motion (radiation) would soon bring its surface to the temperature of death. But the light of the sun is an incessant compensation. It is the sun's light, converted into heat, which sets our atmosphere in motion, which raises the water into clouds, and thus causes the rivers to flow. The heat developed by friction in the wheels of our wind and water mills, was sent from the sun to the earth in the form of vibratory motion.

Nature stores up the light which streams earthward from the sun—converting the most volatile of all powers into a rigid form, and thus preserving it for her purposes—by means of plants. The vegetable world constitutes the reservoir in which the fugitive solar rays are fixed, suitably deposited, and rendered ready for useful application. With this process the existence of the human race is inseparably connected. The physical force collected by plants becomes the property of another class of creatures—of animals. The living animal combines combustible substances belonging to the vegetable world, and causes them to reunite with the oxygen of the atmosphere. Parallel to this process, runs the work done by animals, which is the end and aim of animal existence.

The question is naturally asked, Has not the human will, power to create strength, energy, and endurance? Look at the different conduct of different individuals, under difficulties, whether moral or physical. Look at two men upon a mountain-side, with equal health and bodily strength. The one will sink and fail; the other, with determined effort, scales the summit. Has not volition, in this case at least, a creative power, a faculty of calling up force out of nothing—that is, out of no material source?

As a climber ascends a mountain, heat disappears from his body; the same statement applies to animals performing work. For every pound raised by a steam-engine, an equivalent quantity of its heat disappears; for every step the climber ascends, an amount of heat, equivalent jointly to his own weight and the height to which it is raised, is lost to his body. It would appear to follow from this, that the body ought to grow colder in the act of climbing or working; whereas universal experience proves it to grow warmer. The solution of the seeming contradiction is found in the fact, that when the muscles are exerted, augmented respiration and increased chemical action set in. The bellows which urge oxygen into the fire within are more briskly blown; and thus, though heat actually disappears as we climb, the loss is

more than compensated by the increased activity of the chemical processes. Nevertheless, if our frame be heated by bodily exercise, we must not forget that it is at the expense of our stock of fuel. Physically considered, the law that rules the operations of the steam-engine rules the operations of the climber. The strong will can draw largely upon the physical energy furnished by the food; but it can *create* nothing. The function of the will is to *apply* and *direct*, not to create. The proof lies in the need of rest, and in the prostration often felt after unusual effort, even when successful.

When we augment the temperature of the body by labour, a *portion* only of the excess of heat generated is applied to the performance of the work. Suppose a certain amount of food to be oxidised, or burnt, in the body of a man in a state of repose; the quantity of heat produced in the process is exactly that which we should obtain from the direct combustion of the food in an ordinary fire. But, suppose the oxidation of the food to take place while the man is performing work; the heat then generated in the body falls short of that which could be obtained from direct combustion. An amount of heat is missing, equivalent to the work done. Supposing the work to consist in the development of heat by friction, then the amount of heat thus generated outside of the man's body, would be exactly that which was wanting within the body, to make the heat there generated equal to that produced by direct combustion.

It is easy (by means of the "mechanical equivalent") to determine the amount of heat consumed by a mountaineer in lifting his own body to any elevation. The Professor—may his shadow never grow less!—when lightly clad, weighs one hundred and forty pounds. What is the amount of heat consumed, in his case, in climbing from the sea level to the top of Mont Blanc?

The height of the mountain is fifteen thousand seven hundred and seventy-four feet; for every pound of his body raised to a height of seven hundred and seventy-two feet, a quantity of heat is consumed, sufficient to raise the temperature of a pound of water one degree Fahr. Consequently, on climbing to a height of fifteen thousand seven hundred and seventy-four feet, or about twenty and a half times seven hundred and seventy-two feet, he consumes an amount of heat sufficient to raise the temperature of one hundred and forty pounds of water, twenty and a half degrees Fahr. If, on the other hand, he could seat himself on the top of the mountain and perform a glissade down to the sea level, the quantity of heat generated by the descent would be precisely equal to that consumed in the ascent.

Measured by one's feelings, the amount of exertion necessary to reach the top of Mont Blanc is very great. Still, the energy which performs this feat would be derived from the combustion of some two ounces of carbon. In the case of an excellent steam-engine, about one-tenth of the heat employed is converted into work; the remaining nine-tenths being wasted in



the air, the condenser, &c. In the case of an active mountaineer, as much as one-fifth of the heat due to the oxidation of his food may be converted into work: hence, as a working machine, the animal body does much more than the steam-engine. We see, however, that the engine and the animal derive, or may derive, these powers from the self-same source. We can work an engine by the direct combustion of the substances we employ as food; and if our stomachs were so constituted as to digest coal, we should, as Helmholtz has remarked, be able to derive our energy from it. The grand point permanent throughout all these considerations is, that *nothing new is created*.

We can make no movement which is not accounted for by the contemporaneous extinction of some other movement. And, howsoever complicated the motions of animals may be, whatsoever may be the change which the molecules of our food undergo within our bodies, the whole energy of animal life consists in the falling of the atoms of carbon and hydrogen and nitrogen, from the high level they occupy in the food, to the low level they occupy when they quit the body. But what has enabled the carbon and the hydrogen to fall? What first raised them to the level which rendered the fall possible? We have already learned that it is the sun. It is at his cost, that animal heat is produced and animal motion accomplished. Not only, then, is the sun chilled, that we may have our fires, but he is likewise chilled that we may have our powers of locomotion.

We can raise water by mechanical means to a high level; that water, in descending by its own gravity, may be made to assume a variety of forms, and to perform various kinds of mechanical work. It may be made to fall in cascades, rise in fountains, twirl in the most complicated eddies, or flow along a uniform bed. It may, moreover, be employed to turn wheels, wield hammers, grind corn, or drive piles. Now, there is no power *created* by the water during its descent. All the energy which it exhibits is merely the parcelling out and distributing of the original energy which raised it up on high.

Thus, also, as regards the complex motions of a clock or a watch; they are entirely derived from the energy of the hand which winds it up. Thus, also, the singing of the little Swiss bird in the International Exhibition of 1862; the quivering of its artificial organs, the vibrations of the air which struck the ear as melody, the flutter of its little wings, and all other motions of the pretty automaton; were simply derived from the force by which it was wound up.

The matter of our bodies is that of inorganic nature. There is no substance in the animal tissues which is not primarily derived from the rocks, the water, and the air. Are the forces of organic matter, then, different in kind from those of inorganic? All the philosophy of the present day tends to negative the question; and to show that it is the directing and compounding, in the organic world, of forces equally be-

longing to the inorganic, that constitutes the mystery and miracle of vitality.

Still, though the progress and development of science may seem unlimited, there is a region apparently beyond her reach. Given the nature of a disturbance, in water, air, or ether, we can infer, from the properties of the medium, how its particles will be affected. In all this, we deal with physical laws, and the mind runs along the line which connects the phenomena from beginning to end. But, when we endeavour to pass by a similar process from the region of physics to that of thought, we meet a problem transcending any conceivable expansion of the powers we now possess. Thus, though the territory of science is wide, it has its limits, from which we look with vacant gaze into the region beyond; and having thus exhausted physics, and reached its very rim, the real mystery yet looms beyond us.

### A SERPENT IN ARCADIA.

YOUR honourable disclosures, Sir, awarded to my unveiling of a Snake in a Arena—(it was you as assisted me to that title of my dubious Cousin)—incite me to offer you a second appeal under circumstances which ensued to myself and another, after our expatriation from a lordly mansion, where if haleyon Peace was not always found (as the song says) Perquisites largely accrued.\*

Shortly after that mutual demolition, made public in a precedent story—Me and Miss Mary, like our first parents when cast afloat on Egypt's desert, united our hopes and hearts. Prudent the scheme might not be conceded—but prudence is wintry comfort to loving ones that bleed in company—not to mention united parties being two in the same bark, unless opposing tempests diverges them.

Though united—me to Miss Mary—it was agreed that the nuptial tie should be adjourned in promulgation. The most nourished plan may eventuate to grief, if secrecy does not preside. Her Majesty, I have heard my former Lord say, if once a thousand times, would yield the brightest jewel in her possession, rather than express what she is machinating against other royal sovereigns which discretion precludes naming. And if those who long may reign over us, can only thus make good their projections—what are their lowly subjects to defend them with, in case Curiosity leads the van?

There is classes, Sir, you will admit, which when they come down on us, finds the most robust nerves not too much for the task of parrying. And that Mings, he is such. Blighted by the thunder which had emanated from most of the aristocratic families in our connexion, and baffled in attempts to elicit new openings, he was compelled to abandon his photographical as a medium of subsistence, and to attack

\* See AN AREA SNEAK, page 282, in the last volume.

new channels of life. It was like him to seek the sinews from one he had perjured so deeply as myself and partner. But the boldness among them of his order, is a bottomless pit.

I should calmly prelude, Sir, by stating, that when me and Miss Mary no longer, united our hands and hopes, discussions as to our path naturally rose on the horizon. Candour would forbid my denying that she has a sweet taste in the milliners' business, as many a head-dress from her hands associated with names of French origin could testify, did her previous lady's wardrobe speak sincerely of former days. We sat on the subject; and alive to what is permanent in fashions and what is momentary, "Mary," said I, "Bonnets is what all English females, actuated by the pure dictates of their sex, must subscribe to." Mr. Schmalz the courier, at whom my Lord has flung his boots one hundred times if once (as Mr. Clover, the butler of other days, will authenticate in your venerable organ of opinion if required), has mentioned that in foreign parts, parties wear shawls and veils, and sometimes go as bare as a fan and a flower, by way of covering for the hair of nature and art; but were these to be converted into examples? Forbid it old English truth, and modesty and decoration. Sir! as I am sure you will admit, who never allow the language of our born enemies to pollute your own fashionable and sweetly popular fictions!

And thus it was agreed among us to organise a Bonnet Emporium in an Arcade, which, not being an Area Sneak, I do not publish its name. But the deference of the promulgation of our nuptial tie having been decided on, analogous consequences ensued. It is more genteeler to present bonnets on a plate, as executed by Mademoiselle Mireille than as Mrs. Wignett. Because every heart in your native home will subscribe to the fact, that maiden names attracts, however attesting be the flight of Time. View our theatres, honoured Sir, and consider what is requisite there! And excuses was cogent in our peculiar case, owing to the course which our chart of operations had agreed on itself to take. It was of consequence that my antecedents should repose in the background, out of deference to prosperity in our conjoint undertaking.

Well, our Emporium was taken in the Arcade—private residence being in other parts—and a heinous expense having been incurred in a frontispiece of plate-glass, which displayed the offspring of my partner's taste, aided by a Mademoiselle from Paris (of whom I regret you will have further to hear). She was complimented by all the jealousy of the vicinity—so superior was the style of our articles exposed. I was backwards and forwards, under the guise of a casual person; having entered into engagements with several of the Exhibition people. Painting gentlemen are sadly short of models to attract; and a careless poetical cultivation of beard, now emancipated from the thralldom of service, imparted a new aspect to that of other days. So that in my own sphere I was not seldom in request; and will say that the pictures which was ani-

mated by my presence attracted crowds in Trafalgar Square (more of which if time and diffidence permit at a future juncture). My partner, too, observed that when I was backwards and forwards—mostly sitting at the Arcade, as a casual purchaser, and difficult to please—those hours was the briskest as regarded custom; sometimes to the amount of plenteous ladies. Shops not frequented by gentlemen are little thought of among the fair sex.

Judge, then, Sir, of my feelings, when—one day, coming backwards and forwards as usual, a little stiff with standing to Mr. Peeks, as Sappho's youngest son, on the occasion of the latter being struck with lightning—I finds, as bold as brass, in instillation where I should have been—the party, whom your bolt bursting from its cloud judiciously entitled a snake—my down-cast cousin. Mings!!! Seedy indeed, he looked so much so as to be disservient to the Emporium; but no customers was present. Mademoiselle taking her meals up-stairs. And if I was ever glad that those French females are long and greedy over their food, I was glad then—since Mings, I hoped, was only a passing call, and I was determined to prevent it as such. But a match for a snake, what unarmed mortal can be?

"Timothy," said Mings, springing up from my chair, so loud that half the Arcade could hear it. "This is your game, is it? I thought so, when I saw Mademoiselle Mireille, though *she* wouldn't own it. O woman! woman!"

"Mings," said I, "after the ruin you have wrought, be polite if you cannot be anything solidier. My wife and I are one." And I pulled up the look of a Spartan, which I had been requested to assume by Mr. Eager, when intent on his great picture of Tiberius, in his ruins, sitting on the domains of Carthage.

"Your *wife*!" and Mings he laughed like the serpent as he is. "Your *wife*! Come, you old Timothy, let us look into this. If so be you are married, let us know why it is you are like the ostrich that conceals its crest in the burning strand of the Desert? We used to be in one boat, and if so, why so no more? Is this to be a secret among three, or two? And by the way, if you have half-a-crown about you, hand it over. I came out without change."

Who could have parried this? and yet if daggers could have struck an individual to his culpable heart, they was in my eyes, as I handed over the silver to Mings. He endured as callous as an icicle.

"Well," says he, "Cousin Timothy, if this is a secret marriage of yours, I do not see why I should not be best man after the fact."

"Mings," says I, "beware what you do, and consider your end. In this abode, no more Tancreds reside for traitors to photographicate. We have parted, let it be once for all!" And as I looked at the door, I looked at it expressively, recollecting what had passed when Mr. Bonerville was getting up his picture of the Bride of Lammermoor, in which I was accountable for the HERO's posture.

But such as him takes no hints: delicacy being emitted in their composition. "Timothy," says Mings, as loud as before, "photography and I have parted. I am now an organ of public opinion—secretary to an influential paper."

I shook, Sir, as I heard my Cousin's appeal; knowing, by yourself, what those who rule them papers are equal to do, or to undo—and supposing from his imperiousness, that he was connected somewhere. Who knew but with Punch? My partner and me had often in our maiden days talked Punch over as a salubrious influence on the haughty classes of this world.

It proved not Punch, however, Sir. "I dare say, Timothy," said Mings, sticking his thumbs in the arm-holes of his waistcoat, and crossing his legs for the entire afternoon, "that, reader though you are not, you may have heard speak of the Orb of Fashion. I am one of the principal writers, and it proves you sadly in arrears of the world, that I don't see it lying about here; though of course it is a cut above the Arcade."

"Mings," says I, in unfeigned unacquaintance—ship—and yet who would be behindhand in duty to one's order, when reflections was cast on our neighbourhood?—"Our copy goes, instantaneous we have finished it, to Lady Maria: because my Lady will read no paragraphs save those of my wife's marking."

"Timothy," was his answer,—the serpent, he knew as well as I did, that I had never set eyes on any of their Orbs:—"Timothy, if so be, yours is to act the part of a true relation: and I am glad to make it up with you. Then if you have another half-crown about you, it will be five shillings, and such is even money."

Sir, weakness, when knavery assails, has been, alas! too deeply my motto,—and that extortionists takes cruel advantage of it, the sad sequel shall disclose. Besides, I heard Mademoiselle coming down; and he was not that aspect of person one likes to be seen lending money to. So I had not time to weigh, and I said, imparting the second loan, "There, Mings, good day."

"Good day!" says Mings, "I've not begun yet! and it was only for your advantage, and not the Orb's, that I called to consult you on a matter of business."

I see I was in for it, and felt the labyrinth round my neck; and he saw I saw, and I saw he saw and was alive to the labyrinth, by the twinkle of his eye. If a customer had come in, who knows what might have been diverted? "Madmysel," said I to our assistant, who at the juncture descended, "perhaps you'll go up for a quarter of an hour. There are them tuberoses to look to. Private business predominates."

Madmysel Claire did not like dismissal, French females being curious, and Mings having fixed her with his glass in a manner suggestion of vanity, against which no female heart is proof.

"Madmysel!" says Mings, with a little laugh, when she had ascended. "Come, I say, is she married too? and if married, what's her name?"

"Mings," said I, "jocularity may trespass beyond the brink. My wife's assistant—all our

assistants upstairs" (the phib injured nobody), "are unmarried; thus leaving them more at liberty to indulge exclusive energies on the bonnets. And so, on the spot, before we are interrupted, about business. If you have any proposal to propose, propose it sincerely."

"Proposal! I believe you!" and the insidious laugh of the hyena was repeated. "What a thing for your Emporium (*Mademoiselle Mireille's*, I should say) to be promoted in the Orb of Fashion! the sole depôt in the Arcade which can hail that proud distinction. Come, Timothy, since Peace it is to be, shall I open our columns to your interests—(*Mademoiselle Mireille's*, I should say?) Since Mrs. Wignett would not attune with the expectations of our aristocratic subscribers."

I own I was snared, Sir, never having seen or heard of the Orb of Fashion till that juncture: yet knowing how proud the power the Press can wield, as indeed, Sir, who elucidates like yourself?

"Mings," said I, "do you mean handsome reciprocation; and not as before, when your imprudence drove myself and partner from our anchors in a lordly home, to embark in these precarious seas? How about my wife's Emporium and the Orbit of Fashion?"

"Timothy," says he, "suspicion has been too much your forte. Beware now! Was we to talk in our Orb of Mrs. Wignett's bonnet-shop in the Arcade, would Lady Maria read the paragraphs of Madmysel Mireille's marking?"

The serpent! But I felt that his sarcasms (alive to the screen I had erected) bore a core of truth in them; and that we were at his mercy. And the Orb of Fashion—who knew?—might one day, in its galaxy among the fair, rival the Times. "Mings," I said, "if there is talk to be of my wife's Emporium in the Orb of Fashion, what are your views? State them in an above-board and graceful manner. Of course" (for I struggled to the last, Sir, to assert my independence), "the Orb will pay handsomely for information?"

"Pay!" roared Mings, bursting out into such a cataract of derision that the vicinity was alarmed, and two opposites and a casual customer came rushing in, inquiring was some one in spasms; and down came Madmysel Claire, expecting also a paroxysm. Scenes has always been my bane: and Mings, the cockatrice, knew it, and that I wished to cut this catastrophe short, so he said in my ear, "Timothy, give me some dinner somewhere, and we'll soon square matters all round, over a glass of wine."

I was too thankful to extricate, with a view to peace and customers, to have made any head against Mings, had he insisted on tea and supper no less than dinner. At the Yellow Posts, on that lurid and fatal day of the compact, he cost me fifteen shillings, besides the five he had procured out of me. On the whole, a sovereign.

Nor did he let we two part till it was settled that Mings was to be on our free list of Bonnets, so long as his Organ of Opinion devoted itself once a fortnight to the interests of the Emporium, by awarding it a prominent place in the annals

of establishments repaired to by fair and noble clients of the higher classes. Shylock, Sir, did not imply a bargain more ruthless; but I yielded: since to the power of the Press I have been always implicitly dismissive; and thus I humbly trust that your electric beam will make that insidious blighter of hopes by false expedients wither a second time (as at Belshazzar's Feast), be the glare of his prosperity ever so transcendent.

For some weeks, almost up to the point of a quarter, the halcyon Peace presided; and the Orb and the Emporium moved in intimate harmoniousness. Mings, he is not much of a author, and in Epithets of Taste, he was for ever coming backwards and forwards, pretending that Millinery was alien to his horizon, and applying copiously to Madmysel Claire for exactitude in terms. Our assistant was more down than up-stairs; just then, circumstances, which crown matrimonial life, making it expedient for my wife to refrain from extraneous publicity; and so, to distract curiosity, it was denounced in the Arcade, and advertised in the Orb of Fashion, that the extensiveness of the Emporium, also to establish foreign agents, would necessitate Madmyselle Mireille to repair to Paris; Madmyselle Claire (and our assistants up-stairs) conducting the business during her departure. The advantages taken of this attitude of events by yonder black and twining serpent, would baffle a catalogue. It was not solely being backwards and forwards for epithets; but at meal-times on every possible occasion. The tea and muffins he drank would fill a volume; and did the muffins fail to be fresh, Mings began to look gloomy, and state that the Orb of Fashion had been strictured on by malignant opponents, for showing indiscretional favours to this Emporium. Other Arcades, to hear him talk, was pressing in their advancements on his pen. How little could I dream that his Orb was verging on its last legs. Just then, secure as the Mariner of the Sea, who lies becalmed above a couch of coral, I was concentrating on Hamlet for Mr. Titiens Pink's great picture; so that you, Sir, who have seen it, and therefore have admitted as you must, that here was no milk-and-water Royal Dane, such as foreign versions have deluded old England's metropolis to subscribe in,—must be equal the same, aware that the fire of frenzy luminating and sparkling from my eyes, was no easy mood to assume for hours at a sitting, on five mornings out of six (and sometimes, to be candid, on Sunday afternoons), especially on the part of one, whose criterion of character has always been confessed to be amenity.

I say, Sir, I dreamed delusively, that the alliance was sound, and the Orb and the Emporium flourishing like twin sisters of the soul. My wife, Sir, she was more early awake to the mysteries veiled by the curtain of serpentine audacity. But this I subscribed to the irritability of her predicament; and did she protest against such a profusion of visitations and objection respecting muffins, on the part of Mings,—alert to pacify, "Mary," I would say, "recollect how our joint interests, aided by them papers, is

flourishing,—and the proud position of the Emporium, especially since our recent inventions."

For the Emporium had been copious and fertile. I will only name three, to each of which the disquisitions in the Orb of Fashion, Mings declared, had caused the palm of success to fall. The SWEET HAT, decked with primroses and other artless weeds, fit for the use of the young; but which was seized with such ardour, that there was eight middle-aged gentlewomen wearing spectacles, in the Emporium at once, mutually pushing, and using rude terms, in order to secure the first choice. The STRONG-MINDED VADE-MECUM, destined for those lonely tourists of the sex, to whom self-protection is more apposite than absorption by male flatteries. This, too, had its hour, mostly among the dissenting classes; Quakers, even, who, as my wife used to say, must be sick of confinement to dreary coal-boxes. The ROYAL NON-PAREIL, which her Gracious Majesty had expressed she had never seen anything to compare with it. Two days after that sentence was promulgated in the Orb, the Emporium was inundated by a commission from Hull and other districts; and six cases was despatched within the week. Madmysel Claire, because of the stress, included she was obliged to stand out for double salary;—which being demurred, she declared her plan of writing a letter to the Orb, also to the Society for Cruelty to Animals. (I have since had cause to ascertain that her rapacious course was prompted by that adder in male form.) Loth as is every generous heart to succumb, be the crisis ever so impendent, caution and my wife's prospects kicked the beam. We acceded, and Madmysel Claire received her ill-gotten gains. It may have been a mercy that the run on the ROYAL NON-PAREIL sunk into the sand as rapidly as it had originated.

What boots it? Prospects smiled; and who but a snake such as he, could enter into the yawning volcano beneath our feet? It now was but a week, when my wife's departure to Paris (which in reality Paddington) was to take place, and she and Madmysel Claire had invariable preliminaries to operate, during this period of my partner's abstinence, when our assistant was to take the ruling part.

"Timothy," said my wife, at the close of one of their committees in union. "Flesh and blood can stand such no longer. The Emporium will crumble unless rescued; and as I know you are a poor chicken-hearted creature, I have written to him to tell him to desist. Pillaged I, and the child that is unborn, will not be; whatever their Orbs may say and do."

"Mary,"—was my reply, "don't excite hysterics, which is of serious importance as you are. Pillagers cannot exist in the Arcade—during three beadles parade it, as you are aware, till closing time."

"Timothy," she broke out (of late her temper had been more boisterous than elegant), "if you are a goose, out with it like a man! And you are a goose or you would have defended your lawful wife against the pillage of that speedy and ill-conditioned sponge—that beau-



tiful cousin of yours. Unless you are in league, and this looks fearfully like it."

"If you scream, Mary," says I, "we shall have the neighbours in, and reality will be disclosed." She adopted my hint, because she felt its value, and dropped her tone. But this was what she proceeded, so far as tears would let her,—and the story did look grasping to an amount of alarm.

It was the invincible acts by which that smooth-faced viper, Mings, had availed himself of our compact with a vengeance! During the past three months, by hook or by crook, he had extracted (the free list as presumption) Bonnets from the Emporium to the tune of two a week, in addition to all he had partaken of at our cost—grog not having been touched on in the above, when business hours was over, and we would assume our two cigars, and interchange on subjects of art and aristocracy. What had Mings done with the bonnets, which had been the victims of his predatory covetousness? What, indeed?

"And you have writ," I faltered to my wife, "to Mings, enjoining future temperance?"

"I believe you, Timothy," said she—"and his feet in our tea and muffins he won't set again soon. Upwards of thirty pounds' worth of good bonnets gone, as if any of their Orbs merited such a plunder." And on this, though my partner had reduced her voice prudentially, Nature and Vexation triumphed. She went off on the spot; and to bring her to, and to get her to our home, unseen, unsuspected, and the whole circumstances undreamed-of by envious eyes, that is always lurking what secrets they can pick up, was a task to distance giant nerve. It was effectuated though; but if my hair that night had turned white, as Cleopatra's did while wooing the asp, on the eve of execution, what mortal could have found it improper?

The bolt was shot, however. Ominous silence pervaded all. Mings and the Emporium were two;—and as coincidental, I should say, that, during that very week, the Orb of Fashion fluttered to the close of its existence, and its spirit took wing to some other sphere.

I avoided coping with the familiar haunts for a few days—because Mings, I knew, was equal to the production of any sensation, gain and revenge being his sole object. A riot in the Arcade would not have conducted to the predominance we had ever maintained. Then, for that week, the onerous duties of my separate profession—one hour a butterfly gay deceiver of the Court of Spain—the next a melancholy Faust brooding over the crucibles on his anvil—was absorbing: not to speak of home vicissitudes, possibly to be ascribed to past reserves of reality. For many days, ere our boy entered this mortal hemisphere, she was ailing and low; and if ever female was actuated by jealousy on that, or any similarly posthumous occasion, my wife was. To soothe cost me many anxious moments of care;—and retrospections of lighter days of fancy and freedom, now exiled for ever.

But when the hour of danger was past, since not a syllable had been breathed from the Emporium, and as Mings, that cruellest of croco-

diles, had not turned up (quenched for ever was my hopes, by recent disruptions), I wended my way thither to the familiar place of dear hopes and recollections, one Tuesday evening. I thought the officials glared scornfully as I passed, and this was borne out by the public sarcastic expression of the vicinity. My heart drooped. When a storm is a-going to descend, some parties, especially them of a delicate cast, is acquainted beforehand.

I reached the beloved precincts. The spells of decease pervaded them. The shutters was up. No light, no sound, no bonnets. On the exterior side was a placard, thus:

**A CARD.**—MRS. WIGNETT'S BUSINESS being interrupted by her Confinement, the lovers of Real Bonnets are directed to the Parthenion of French and Female Taste, No. 17, seven doors lower down on the opposite side. The Parthenion is conducted by Mademoiselle Claire, the primum mobile of Mrs. Wignett's establishment.

Mrs. Wignett's friends will be glad to hear that her recovery is proceeding most salubriously.

And so myself and partner were shut up a second time by that Mings.

#### BOUNCING BOYS.

WHAT clever fellows the rising generation of boys ought to be when they grow up! What splendid opportunities they are having compared to those which fell in the way of the boys of the last age! The familiar playthings of the boys of to-day are the applications of arts and sciences, which the last generation scarcely dreamed of, and which the most thoughtful men of the time spent their whole lives, and sometimes broke their hearts, in the endeavour to fathom and discover. All these problems of science and art, then so hopelessly meshed and knotted, the boys of this day can unloose familiar as the laces of their Balmoral boots—I will not say garters, for in these advanced and elastic times such adjuncts of dress have become obsolete, even for the purposes of metaphor. The Shakespeare of the future will not have such simple things as garters to deal with when he wishes to show how easily some accomplished modern can unloose the Gordian knot. Henceforth, Puck and his girdle will be a fool to the Atlantic telegraph. But as to these modern boys—boys who are born, christened, breeched, and married, and set up in life all in a trice!—those boys take away my breath. I wonder sometimes if they can possibly be of the same genus as the boys with whom I associated when I myself was a boy. I paid a visit lately to a gentleman in the country, and in going over the house to view its lions I was shown into a room where my host's boys printed a weekly newspaper *for their own amusement!* There were all the appliances of a printing-office: cases, galleys, rules, imposing stones, and presses; and two young gentlemen, whose united ages, probably, did not amount to five-and-twenty, were so far familiar with their

use as to be able, unaided, to compose and print a weekly sheet containing news and articles of their own writing! I thought of my play-room and what it contained. I had a vision of a penny top, a popgun roughly made from a branch of alder-tree, a kite composed of a halfpenny cane and a sheet of brown paper, a worsted ball wound upon an old barrel bung, and a teetotum.

Again; the other evening I went to a party, and I had scarcely entered the house when my host's two boys carried me off into the garden to take my photograph. One, quite a little fellow, posed me in the chair, instructed me to look at a certain spot, and warned me of that principle of the convex lens which has a tendency to enlarge feet and hands which are placed too much in advance of the rest of the body. The other boy, meanwhile, was in a dark room, playing with subtle chemicals, of whose nature and properties his grandfather the eminent chemist had never even dreamed. In less than five minutes these two youngsters had used one of the closest secrets of nature to fix my image on a piece of glass. It was as easy a feat for them as it was for me to lift up my top, while spinning, in a spoon or in the hollow of my hand.

I had another vision: Of a party at home, when I, as a boy, the age of that juvenile photographer, was considered rather a bore, and was only permitted to bother the guests for half an hour or so after dinner. It was not supposed that I had any entertaining powers whatever. The guests, in the goodness of their nature, would kindly endeavour to entertain me, by giving me an apple, and perhaps telling me a pretty little story, all in simple words of one syllable. After which I was carefully sent to bed before supper. But these modern boys: they bring you their newspaper to look at; they photograph you, they play the accompaniments to your songs, they astonish your weak mind with the magnesium light, they sit up to supper, they tell you the latest news by telegram—in fact, they entertain you. When I was a boy, my stock of play literature consisted of some half-dozen sixpenny books, such as Jack the Giant Killer, Puss in Boots, the History of Cock Robin, and an abridgment of the Arabian Nights. I remember that I kept them locked up in a deal box, and was exceedingly chary of lending them, or even letting any one look at them. But boys now-a-days take in their monthly and weekly magazines, correspond with the editor, answer riddles and rebuses, contribute puzzles and engage in chess tournaments by correspondence; nay, they club subscriptions to Mudie's, and read all the new sensation novels as they appear. I see some square-capped boys, of not more than fourteen years, going to school every morning reading their penny newspapers. I have no doubt whatever that they read the law and police reports under their desks when they ought to be learning their lessons. Boys and hobbledoys used to be a nuisance, because they were lumpy, and awkward, and uninteresting; and because they were too young to share in the conversation of grown-up people. But now-a-days, if boys are

voted a nuisance at all—which they will not tamely permit—it is because they are too clever by half, and know a great deal too much.

Inwardly and outwardly the British boy has undergone a great change. Everything about him is in an advanced state. His mind is manly and so are his clothes. Your modern infant grows so fast that you never can catch him in jackets. When he emerges from his swaddling-clothes, he slips through your fingers, and vaults into a tailed coat. He casts aside his feeding-bottle, and his pap-spoon, to clap a cigar or a meerschau-*schau*-pipe in his mouth.

The modern youth forces his whiskers, as the modern market-gardener forces his asparagus. He has no pause for lay-down collars of the old patterns, nor for a round cap with a tassel, such as the boys of the Own Book used to wear. He is a new pattern of boy altogether. Look at the frontispiece of an old Treasury of Knowledge, and see what the British boy *was*. There is his papa—also of a pattern peculiar to the period—seated at a table with a terrestrial globe, a retort, a pair of compasses, and a heap of books at his elbow, allegorical of the entire tree of knowledge and the whole circle of the sciences. You will observe that his papa wears a high-collared coat, a very short waistcoat, and tightly-fitting trousers, which, when your paint-box is at hand, you are irresistibly tempted to colour yellow. Your idea of that papa is, that he has always been a papa, and that his whole mission on earth is to teach the use of the globes to his son with rigid paternal severity; just as your idea of the boy is that he was born a boy like that, and for no other purpose on earth but to be taught the use of the globes and overawed by his papa. Look at that boy. His outline is composed of a series of curves—curves for his cheeks, curves for his arms, curves for his legs, as if his papa had constructed him with the pair of compasses. He is the good old-fashioned sort of boy, who was fond of pudding, who over-ate himself when he went out visiting, who robbed orchards, who had all the complaints of infancy in rapid succession, and never missed one on any account; who carried gunpowder in his pocket, who was always in mischief, and who, as regarded his most honourable curve, seemed to be specially adapted and cut out for chastisement. When I look at the portraits of that boy of a past age, I can quite understand how the schoolmasters of the period could not keep their hands off him. The whole physical development of him was a standing invitation to the cane.

If schoolmasters don't flog now, it is not because they have lost faith in the virtues of birch, but because the modern boy is morally and physically repulsive to the cane. Those inviting curves of his have been smoothed down; his jackets have assumed tails. He wears gloves also, and is thus armed against correction at all points. Intellectually, too, how could you think of administering flagellation to a boy who writes, edits, prints, and publishes a newspaper, or be guilty of the outrage of boxing the ears of a boy who is versed

in the properties of nitrate of silver, and knows how to decompose the light of the sun?

I repeat, that these boys, when they grow up, ought to be very clever fellows. If there are any new discoveries to be made, any more secrets to be wrested from Nature, those boys ought to be able to accomplish the work without difficulty. They have at their fingers' ends, settled and defined, all those important elementary principles which their fathers and grandfathers had to test and settle and define before they went any further. The foundation has been laid for them; they have but to build the superstructure; and effect novelty by varying the plan.

I think it possible, however, that the intellectual growth of the modern boy may be a little too rapid, and that, like trees which grow quickly, his timber may be rather too soft for the solid purposes of life's carpentry. Difficulties are so smoothed for him, and he is set out in life so well provided with all the necessities for the journey, that it may be feared he will have too little occasion to exert himself. In the generation which is passing away, some of the most remarkable men of their time were the architects of their own fortunes. The temples of fame and honour which they built for themselves they built from the very foundations. They began single-handed, with a pick and a spade, to dig out the stubborn ground before they proceeded to lay the bricks. But the sons of these men come to their architecture with white kid gloves on, and lay fancy foundation-stones with silver trowels. Suppose the edifice were to be completely destroyed, would they be fit to dig and carry bricks as their fathers did before them? I don't say there is any lack of energy or pluck (I use the word, though I detest it) about the rising generation. Those qualities are as inherent and as well cultivated in Englishmen as ever they were; but I *do* fancy that there is a growing disposition to exercise them more for ornamental than useful purposes.

The middle class of the present generation is much better off than the middle class that preceded it. Half a century ago the parents of the middle class were nobodies: it was the sons who struggled and made their way and raised themselves. But now the important persons are the parents; the sons merely inherit the silver spoon. They are born with it in their mouths, and they go on supping their turtle soup with it as complacently as if they had won it for themselves—more so. Tradesmen and tradesmen's sons act as if their business were entailed like an earl's estate, as if there were a law of primogeniture for ironmongery and tea dealing. I have now in my eye half a dozen tradesmen's sons, who, as soon as they arrived at the supposed years of discretion, were immediately set up with a house, a wife, a horse, a plate basket, and an account at a banker's. I meet them occasionally in first-class dining-rooms, where they fare sumptuously every day, and eat turtle and drink champagne as by right. The inquiry I wish pursued is this: Is the rising generation of the middle class, with this education and these habits, likely to sustain its substantial character and position?

Is there not some danger to them of the hard working class below, rearing an active, energetic, well-educated progeny, which will sooner or later step forward and push the present middle classes from their stools?

I will not pursue this branch of the inquiry further, but leave it to those who may have a wider experience to assist their philosophy. I prefer to turn to the intellectual aspects and influences of our modern youth. In one respect the boy of to-day is much better educated than the boy of yesterday. Schools have improved of late years, and the system of teaching is generally more intelligent and rational. Parrotting from books has gone out of fashion, and boys are taught to understand the meaning of the words they utter. While Greek and Latin still maintain their place in the curriculum, more attention is paid to modern languages, and almost every boy at a good commercial school now learns French and German. The use of the globes is no longer such a profound depth of learning as it was in the old days. Chemistry takes its place, and the retort of the frontispiece is warranted by reality. But with all the advantages of an intelligent and comprehensive system of education, the modern boy is at a disadvantage in respect of certain other matters of very great importance. I refer to the softening and civilising influence of the belles lettres, the "artes," as the well-known Latin aphorism has it. I am afraid the modern boy is not sufficiently brought under this influence. Not that he does not read enough, for he reads perhaps too much; but he does not read the right thing. Question one of those very clever boys who print newspapers and take photographs, and you will most probably find that while he is well up in the periodical literature of the day, the magazines and journals, and the novels of the hour, he has never read the Arabian Nights and Robinson Crusoe. Boys, now-a-days, do not begin with sixpenny editions of Jack the Giant Killer. They skip that innocent and delightful starting-point in literature, and vault over many intermediate stages besides. I find well-educated young men of twenty who have never read the Waverley Novels, who know nothing of the glorious romance of Ivanhoe, save what they have gathered from a parody in some so-called comic publication, or a burlesque at the theatres. I once knew a popular author, all of the present time, who had never read the Vicar of Wakefield. Our young men also skip the poets. There was a time when parents and guardians had to complain that their sons and wards were Shakespeare mad, and wasted their time in declaiming plays; there was a time, not long gone, when Byron and Shelley had to be hid away from impressionable youths who were too much given to poetry. But, now-a-days, Shakespeare and Byron and the rest of the English classics lie with dust an inch thick upon them.

It is not likely that I am going to run down the literature of the day. It is, on the whole, better literature of its kind than has ever before been produced, and we have

authors and poets among us who are worthy to be mentioned with any who have gone before them. But we have too much fact, and too little fancy; too much mere Railway-art of literature, and too little respect for a work of Art. Every man who has learned Greek and Latin, and made himself acquainted with heathen mythology, is sensible—though perhaps he can scarcely explain how—of possessing an intellectual power derived from those branches of study. So, a similar power, a similar cultivation of the intellect and the understanding, is derived from an early acquaintance with fairy tales, with romances of chivalry, and with those pure and simple works of fiction such as Goldsmith's *Vicar*, which have been exemplars to all the greatest of the modern writers. It is not, perhaps, a good thing to frighten children with ghosts; but it is not altogether a good sign when children wake in the night to explain on scientific principles the moving shadow which their nurse has taken for a beneficent Fairy. Give children printing-presses, retorts, and chemicals, to play with, by all means; but don't let them skip the Arabian Nights. Let them wear out at least one jacket. Let us have had experience of Blue Beard, when we come to have a beard of our own. Let us have known a talking wolf, through Little Red Riding Hood, as well as the speechless wolf in the Zoological Gardens. The last navigator will be none the worse for having believed in Sindbad the Sailor; and I wager a thousand pounds to a shilling that my dear PROFESSOR OWEN has had faith in the Roc.

#### POACHING AN ELK.

THERE are few of us who like shooting and have not at some time of our lives "done a little bit of poaching." Of course I refer to gentlemanly poaching. I am a J.P. now, and of course, Justly Particular. Still I have done one or two things of the sort one might be had up for, even since I have sustained magisterial honours. For instance, one night I made one of a party netting partridges, using the identical net which had been taken a week before from a poacher who was caught in the fact, and to whom I gave three weeks' hard labour. But, let me add, I used the net on my own land, and with my own keepers, for I wished to settle the point whether a "well-bushed" field really offered any impediments to netting, and found that it got so inextricably hampered, that the partridges were safe.

But it is not of my peccadilloes at home that I am about to make confession. I fear there is scarce a country in Europe wherein I have not infringed the game laws; and, if the heinousness of the crime bears any direct proportion to the size of the animal unlawfully slain, I have been a poacher of the very utmost magnitude. For I have been, I confess it, an elk poacher, and an elk is an animal standing some seventeen or eighteen hands high, and weighing a good bit more than half a ton.

I was spending the summer in Norway. It

was the year ('fifty-eight) of that terribly hot summer when the sheep died by scores in the parks, and became roast mutton as they lay upon the grass: so you may imagine what it was in a country where the sun was almost as hot at midnight as at noon. It was getting towards the end of July, and I was looking forward to the first of August with all the zest of an old grouse shooter. One day a young Norwegian student happened to put up at the same "station" where I was staying. He, too, was going to spend his vacation on the Fjelds, but disdaining such small fry as grouse and ptarmigan, soared at red-deer, reindeer, and elk. It was to our mutual interests. I, for instance, had a good stock of English powder, an unlimited supply of "Bristol bird's eye," and a brace of first-rate setters. He would not only be an agreeable companion, but would act as my interpreter.

A few remarks on the law relating to the preservation of elk are due in this place. It runs thus: "Any one shooting an elk before August 1st, or after October 31st, is liable to a penalty of forty dollars, half of which goes to the informer, and half to the poor-box of the district." Doubtless, in some respects, an excellent provision, as in a wild country like Norway, with its boundless forests and trackless Fjelds, it would be a sheer impossibility for any native game preserver to keep such a staff of employes as to render the poacher's avocation at all dangerous. By offering a bribe to the informer, the government hit on an ingenious and inexpensive scheme for the promotion of its object. But now mark the weak side! Say that the eatable portion of an elk weighs 800 lbs. In the matter of food therefore, alone, there will be a tolerable supply of meat through the winter. Then there is the hide, and the antlers, into the bargain. On the lowest computation, an elk is well worth thirty dollars. It is easy enough, therefore, for two persons to conspire against an elk, and while one of them does the poaching, his comrade acts as informer, and, by recovering half the penalty, both profit by the transaction.

We had just arrived at our quarters, after a long and dusty journey across the Dovre mountains. The house at which we put up lay on the borders of a large lake of surpassing loveliness. It looked so temptingly cool that we determined to enjoy the luxury of a bath, before going in to sup upon a dish of fresh caught char, which was in course of preparation. Never was bath more refreshing; and certainly never was tobacco more fragrant than when we laid down afterwards on the grass to be soothed by it. All was still; the lake as smooth as a looking-glass, and the sun just setting behind a snow-capped mountain in the distance. But the silence suddenly was broken by the sound of distant voices, and the splash of oars; and in a few minutes we could plainly discern two boats emerging from under the dark shadow of some rocky hills on the other side, apparently racing against each other. I pulled out my "binocular," and soon discovered what I should have taken



to be a large bough floating on the water about half a mile ahead of the boats, only that it was moving almost as quickly as the boats were. But Hans soon enlightened me, and with a sprinkling of genuine Norwegian ejaculations, which would look rather profane if translated literally, pronounced that the bough was an elk, and that the boats were in pursuit of it.

"Now shall we see a bit of fun; each boat belongs to a different farmery" (so he always called a farm-house), "and if one of them shoots the elk you will see such a race as never was!"

"But why shouldn't we try and bag him, Hans? We have our rifles. He is coming straight towards us; and I would gladly give ten pounds to shoot an elk. Down Carlo! Don! down sir," and we all hid ourselves behind a large rock. "You would give ten pounds? Good!" I heard Hans soliloquise, but took no notice at the time of his remark.

Meanwhile, the animal was rapidly approaching, evidently unconscious of any danger in the front. Nearer and nearer he came, straining every nerve to distance his pursuers. The shouts and gesticulations of the men in the boats, each trying to outstrip the other, and the anxiety of the elk to reach the shore, were quite equalled by my intense fear lest the boats should get the first shot.

"Now look you," whispered Hans, "he is making for you point; he will stop half a second to shake the water off him directly he is on land. That is your time!"

"Good!"

The elk was now about a hundred yards off land. The leading boat was not more than a hundred and fifty yards behind; and two of the men in the bows were already standing up, rifle in hand, to let fly the moment the animal set foot on land. There was no time to be lost.

"Now look! he can feel the bottom."

The next moment I sent a bullet in behind the shoulder at forty yards, and the huge animal rolled over in the shallow water, splashing and struggling in the agonies of death. Quick as thought we rushed down to the spot, and dragged our quarry out of the water.

Meanwhile, the first boat had reached the shore, and we were soon surrounded by half a dozen savage-looking fellows, who, to judge from the way in which they spat and swung their arms about and shouted (one of them cried with passion), were cursing us by all the Scandinavian Gods. Presently the other boat came up, and there were now at least a dozen spectators, all of whom seemed to be in a furious state of excitement. This was rather alarming, and I turned round to speak to Hans to ask him what we had best do, when, to my horror, I could not see him anywhere. Where had he gone? He was close by me not a minute ago.

"Cowardly brute," I muttered, "to leave me among such a lot of savages," who, to judge by their looks, seemed ready to kill me. However, he was gone, that was certain, and I had only myself to rely on. Calling Don and Carlo close to me, who did not at all approve of the

presence of so many strangers, I determined to take it coolly; and, quietly lighting my pipe, proceeded to flay my elk.

Whether it was that my friends thought me and the dogs dangerous, or whether my coolness puzzled them, I know not; but after staring at me a long while, for they found it was useless to talk to me, and after they had ejected the most prodigious quantity of saliva conceivable, they went off in sullen silence, and rowed back over the lake.

"Good!" I thought; "and now they have gone, I dare say Hans will crawl out of his hiding-place." I felt convinced he had sneaked somewhere under cover. "Hans! Hans!" I shouted.

Sure enough I heard his voice some distance off, and in a couple of minutes he appeared, out of breath and in a tremendous heat.

"It's all right," he began.

"All right! Yes! I dare say you are all right. But to go and leave a fellow in the lurch like that! You ought to be ashamed of yourself. Why, it's a wonder I'm not murdered and stiff."

"I've only been to the 'Foged' (magistrate) and laid an information against you for having shot the elk. It's all right!" replied Hans, smiling.

This was too much! I might have looked over his desertion, but to go and turn informer was cowardice of the most unpardonable kind!

Hans all the time had been laughing with delight; but, seeing that I was seriously angry, asked me to listen to what he had to say.

"Go on, sir," I said, in a dignified manner.

"Now, my good friend, did you not see one of the men sink off directly the boat came ashore?" I shook my head negatively.

"But I did! So that's your game, is it? Two can play at that, thought I. For you see he was off to the Foged to lay information against us. Now, I can't afford to pay twenty dollars if you can. Besides, as I am a candidate of theology, I didn't want to see my name in all the papers as a poacher. So I ran up to the 'station,' borrowed the man's pony, and set off, full gallop, to the Foged's house. Before I had gone half way, I saw my friend running along in the same direction as hard as he could. He did not recognise me till I came alongside, when, pulling off my hat, I shouted, 'Shall I give your compliments to the Foged?' He knew me then, and seeing the game was up, turned back. So I rode on, and told the Foged how that you had shot an elk, and how that I was very angry about it, and thought it my duty to lay an information against you."

And Hans enlightened me as to the law relating to elk which I have already mentioned, and of which I was then ignorant.

"My best Hans," said I, "I beg your pardon, but I really thought you were a humbug!"

"Of course you did. The Foged will be here directly, so I must play my part. Don't be angry if I abuse you soundly."

Before long, up came the said functionary, looking quite as important as I do on bench days, and began to write down the deposi-

tions. Hans played his part admirably, and was even complimented by the worthy old magistrate for his conduct, when he gave him as a reward half of the forty dollars which I handed over. Then, having once secured his reward, with consummate ability he began to find extenuating circumstances for me—"that I was an Englishman, unconscious of the law, &c."—till at last we all three became excellent friends, and, at a wink from Hans, I asked them both to come up to the house and sup with me. They accepted readily, and under the influence of a stiff glass of hot grog with, and a good London cigar, the old Foged's heart relented so far, that he actually offered to remit the fine. Of course I refused, and begged him to distribute it amongst the poor, only asking him not to let my name figure in the paper.

### MODERN FRENCH MARRIAGES.

FRENCH laws and customs respecting marriage, although they cannot erase and obliterate the natural distinction of sex, confer complete equality and fraternity. A Frenchwoman is not only a wife at bed and board, she is also a partner in business and a joint proprietor, without whose consultation and consent no important step can be taken. She knows when a bill is due, as well as, or better than, her husband. She can consent to, or forbid, her children's marriage. She never sinks her maiden name, but attaches it to that of her spouse in a form very little differing from that of commercial associations. Mr. White starts a concern with Mr. Black; they announce their joint undertaking as WHITE AND BLACK. M. White married to Mlle. Black, are known to the world as WHITE-BLACK. A hyphen, or an AND, makes all the difference. The same kind of fraternity also frequently occurs—quite as a matter of course, existing in the nature of things—in the talk talked, in the books read, in the songs listened to, and in the double meanings laughed at jointly by a Frenchman and his wife.

But while the laws of property and marriage do all they can to rivet the chains of matrimony, there are other influences which work in an opposite direction. Thus, moments of repulsion are sure to occur between a girl firmly grounded in a religion of rituals, scrupulous of small observances, and looking no further, and a man who believes few religious dogmas, or, if he admits their spirit, will not be fettered by their letter. But above every other cause likely to prove the germ of future estrangement, is the way in which French matches are made.

Many of the French themselves are far from being satisfied on this head, and have even the boldness to quote with approbation the advantages offered by the English system as far as happiness is concerned. Some acknowledge it in theory, and would, if they could, reconcile two opposites—interest and disinterestedness. As they cannot, the sacrifice required by disinterestedness proves much too hard to be accom-

plished. Like the young man in Scripture, they risk their chance of heaven rather than give up large possessions. The amount of recent literature relating to marriage, shows the heaving of the popular mind. We have *The Dramas of Marriage*, by Benjamin Gastneau; *The Manufacture of Marriages*, by Paul Féval; *The Marriages of To-day*, by Philibert Audebrand; and *The Marriages of Paris*, by Edmond About. Among all these matrimonial lucubrations, we greatly prefer M. Thévenin's "Marriage in the Nineteenth Century, as it is, and as it ought to be," which is at the same time serious, sensible, and pleasant.

French society, according to M. Thévenin, distinguishes two sorts of marriages; one called "of reason," the other "of inclination." An excellent treatise might be written on the respectable words which, in every age, society has employed to designate, or rather to screen, the ugliest realities. Every day we hear swindlers talk of honour, fanatics of moderation, poltroons of courage. In the wars of nations, both sides fight in the name of justice, right, and humanity. Marriage is not exempt from the same reproach. To call one sort of marriage "a marriage of reason," is to beg the question, close all debate, and condemn marriages of any other sort. It is the old story of one-half of the human race despising the prejudices of the other half, while religiously adhering to their own. What right have certain marriages to assume to themselves the sole and exclusive patronage of reason?

By "marriages of reason" is generally understood marriages concluded under the following conditions, varying in form according to the position of the contracting parties, but exactly the same in principle: equality of fortune, position, and social relations. Any infraction of the rule is certain ruin.

Marriage, for these algebraists of the human heart, is an equation whose terms must be on both sides identical. Unfortunately, the unknown quantity thence resulting, often upsets their wisest and wariest calculations. How can we expect it to be otherwise, when we remember the means employed to make sure of the equilibrium which is declared indispensable between the two belligerents? For the parties, who are to become man and wife, begin by making mutual war.

The strategy of the matrimonial campaign is this:—A young man, getting on for thirty, tired of a single life, without parents, or expecting soon to lose them, exercising a profession whose seriousness is more suited to a family man than to a bachelor, or possessing a handsome competency of which a wife alone can do the honours—this young man desires to marry. In his more or less extended circle of acquaintance, he does not know a single girl whose outward charms have made much impression on him, or whose fortune is large enough to tempt him; nevertheless, he wishes to get married. He confides his intentions to two or three friends. Oh! mon Dieu, he will not be over-particular. Provided the young lady belong to a well-con-

sidered family, in a social position equal or superior to his own; provided that a similar concordance exist between their fortunes, and finally, if possible, that the person herself be not altogether repulsive, he will require nothing more. Be she tall or short, fat or lean, fair or dark, well-educated or ignorant, gentle or cross-grained, healthy or sickly, it is all one to him. Equality of fortune and position are the two grand items; all the rest are accessories.

The friends, then, are on the look-out; they soon discover a score of marriageable girls. The postulant has no other difficulty than that of making his selection. A fête, a ball, a call, a dinner, a simple meeting brought about by a third party, bring the two enemies face to face. The word "enemies" is not employed by chance.

When two armies, or two diplomatists, have met, what is their first, their only care? Of course, to obtain the best possible conditions at the expense of the adverse party. And what means do they employ to accomplish that end? They conceal their forces and their lowest terms, which they only allow to appear when all is over. In all the matrimonial negotiations whence marriages of reason result, matters are conducted exactly as they are by diplomatists. Both of them, suitor and maid, paint—not, perhaps, their faces, although the least said about that the better; but their looks, their words, their attitude, endeavouring to adorn themselves with moral and physical advantages, of which closer intimacy will show that they are utterly devoid.

What does it signify? A good opportunity offers itself; no time is to be lost in striking the bargain. Nobody can live on love and spring water. Money in the funds, farms in Normandy, vineyards in the Côte d'Or, a notary's office with plenty of clients, are precious things of the very first importance. If, by-the-by, the house becomes unbearable, the fortune with its little additions can be divided into two equal shares, and all will go on smoothly again.

The young couple, then, are brought together; the combat is about to begin; for an hour or two, the suitor, without coming forward or compromising himself, is able to scrutinise with his eyes the person proposed to him as his wife. If the eyes are satisfied—and little caution is to be expected in an eye ready to be pleased—it is possible, amidst the confusion of a crowd, by means of a polka, to obtain the favour of a few minutes' tête-à-tête.

All goes well. The young man, enamoured with his partner's charms, returns to the common friend, and says, "I have no objection to conclude the match. But I must have two hundred thousand francs; you know that sum is indispensable."

"Yes, my dear fellow; but no one is compelled to perform impossibilities. We can give only a hundred and fifty thousand."

"Show me, then, another pearl out of your stock of jewellery."

"Easy enough. Did you remark, sitting by the side of your rejected fair one, a very dark-complexioned girl?"

"Yes; and the least in the world awry."

"She has two hundred and fifty thousand francs!"

"If she will accept me, the business is settled."

Fresh presentation, fresh dissimulation. During a month, three times a week, for two hours at a sitting, the lover pays his respects to his affianced bride. On the day when, hand in hand, they swear before God and man to take each other for husband and wife, they have been twenty-four hours in each other's company, and that in the presence of witnesses.

Unhappy creatures! They have not had the time even to think of what they are doing. For a month their thoughts have been occupied with everything excepting marriage. The young man has been meditating solely how he will employ the dowry; the young lady has been considering the items of her "corbeille" or wedding presents. But if a dowry and a corbeille are things not to be despised, it is difficult to believe that they alone constitute the whole of marriage. And yet, that is what is called a marriage of reason!

"All the proprieties have been observed," stupidly say their worldly acquaintances. "They are perfectly assorted! Ah! they will make a happy couple!"

Wait a bit, good people. When the funds have dropped, and the corbeille is worn out, you will see if the proprieties, all the proprieties, have been observed—if the couple be so admirably matched.

Fatigued with the constraint which they had imposed on themselves at the outset (a constraint observed by all polite strangers who happen to be thrown together by chance), they feel that they can no longer support the dissimulation of their real characters; and having no further appearances to keep up—the one for the sake of the dowry, the other for the corbeille—they reveal their true selves with an energy proportionate to the difficulty they had in maintaining the compression. Then, surely, is the time, if ever, to invoke the reason which was so loudly talked of as presiding at the marriage. Then is the time to compliment them on their prudence, and their respect for propriety. What a delightful household, what an admirably-assorted couple, have sprung up out of this marriage of reason!

Monsieur, who was a little saint, a docile slave, while fingering the cash, suddenly feels his despotic instincts struggling in his bosom stronger than ever. He assumes the tone of a master towards the person one look from whom, so lately, either overclouded or irradiated his forehead, and the tyrant bickers at the slightest outlay made by the woman for whose corbeille nothing was fine enough, nothing dear enough.

And the young wife? Do you, by chance, imagine that she does not perform her part in this new modulation of the conjugal duet? She, so white, so gentle, so angelical, so smiling beneath her wreath of orange-flowers, has become yellow, dry, waspish, angular. Mounted on her pedestal of two hundred and fifty thou-

sand francs, she holds that she purchased, not a brutal despot, but a complaisant follower. Madame, to go to a charity-sermon, exacts the support of monsieur's arm, whose tendencies lie entirely turf-wards. At night, the one is attracted to a ball, while the other cannot abstain from his club. So that the marriage of reason (whose sweets have lasted about as long as spring-tide flowers) ends, ninety times out of a hundred, in a separation—not of hearts; for that organ has never been consulted, and had never formed part of the portion on either side. And note well that this is a match made under avowable circumstances; there are others that may be stigmatised as shameful, although placed under the patronage of reason. Take one as a sample of the rest.

It was a young notary. The son of artisans in easy circumstances, he dreamt, as the summit of grandeur, of nothing less than an office in a *chef-lieu d'arrondissement*, a town honoured by the residence of a *sous-préfet*. Three hundred a year (seven or eight thousand francs), after twenty years' labour, was all his ambition; and everything promised that he would obtain his object.

He had been in business three years, and half the cost of his place was already paid. (Notaries' "studies" are purchased, like commissions in the British army.) As a not ill-looking fellow, and esteemed in the exercise of his legal functions, he might, according to local custom, aspire to a dowry of fifty thousand francs, with twice as much in expectation. He was, in short, the man who had the best opportunities in the neighbourhood for making what is called a marriage of reason without doing violence to his own inclinations. He could pick and choose among lots of girls possessing all the qualifications required in that class of society; namely, a decent fortune, sufficient education to know that there is no railway between Dover and Calais, enough piano-playing to scratch off a polka, taste enough to avoid wearing a green hat with a blue dress, a knowledge of pickling and preserving, the capability to shear wool off an egg-shell, and the sense (in spite of a love of finery) to prefer an acre of land to a cashmere shawl, with the habit of attending church merely for decorum's sake. In other respects, brought up in the most complete submissiveness, purity, and ignorance. Assuredly, for matrimonial speculators, it was the beau idéal of a chance.

Well—would you believe it?—this smart little notary, who, as the saying is, had only to stoop to gather the fairest flower, cast his eyes on a girl older than himself, scarcely three feet high, idiotic, subject to St. Vitus's dance, and superlatively hysterical. True, she was an only child; and nobody, except the notaries of the neighbourhood, could state the exact figure of the paternal fortune. The most moderate estimate put it at fifteen hundred thousand francs. That was the bait.

After many a cautious feeler to ascertain whether he were likely to suit, the bold young notary was admitted into the fortress. The

father who, for form's sake, had made some slight resistance, decided at length to conclude an alliance which, at one stroke, had the double advantage of ridding him of a heavy burden, and of giving him a son-in-law capable of managing his numerous affairs.

For the consideration of five hundred thousand francs, in the shape of dowry, the notary, who sold his office, swore at the altar to ensure the happiness of a woman whom he could not look at without disgust, and so contracted a marriage which his fellow-townsmen qualified, not indeed as a marriage of reason—the term did not express sufficient approval—but as a marriage "*de haute raison*," of high reason!

What admirable devotion! Was it not a sacrifice of self to link himself for life to so abject a creature, and to devote his abilities and acquirements to the service of his opulent father-in-law? True, the five hundred thousand francs were regarded as a sop of consolation—no; not that—as the reward of his cleverness.

That match gave rise to heaps of envy. But although the story is historical, it finishes exactly like a tale. For events—which is a pity—sometimes take the liberty of occurring as novel-writers would make them occur. There was a final chastisement. After two years' married life, the idiotic dwarf, who gained strength by accidents that kill ordinary women, buried for good and all her hard-working and expectant husband, who died therefore without touching the fortune for which he had sold himself body and soul. Providence does not seem to favour marriages of such excessively high reason.

Keeping to the strict sense of the words, the union termed a marriage of inclination would be one in which reason is set aside, despised, trodden under foot. Nay, the word "*inclination*" is too timid and gentle to express the meaning of those who apply it to this kind of marriage. They would imply blind passion; something worse, perhaps. They will be greatly astonished at being told: "Your marriage of reason is an act of folly, since you have converted it into a commercial contract. Its true name is a money-match. No one denies that the voice of reason ought to be invoked, and listened to, in concluding a marriage; but reason, really worthy of the name, requires other conditions besides the equalities laid down as bases. Ruminant *La Bruyère's* skit. 'If you choose to commit a folly, and marry for a passing whim, you will espouse *Mélie*, who is young, pretty, well-conducted, economical, whom you love, and who loves you, who has a smaller fortune than *Ægine*, whom they want you to marry, and who, with a rich dower, will bring you a rich disposition to spend it, and all your worldly goods besides.'"

In fact, what will it profit me to marry a woman who is more or less rich, if, for many grave and inevitable reasons, I cannot live happily with her? Far better to remain poor and single; I shall at least preserve that inestimable treasure commonly called liberty. I shall not



then be obliged, in order to regain a small fraction of it, to give the lie to all my engagements, and to violate my most sacred vows. Looking marriage bravely in the face, to give a definition of it, we need not hesitate to say that matrimony ought to be an improvement in the condition of both the parties.

If marriage ought to be an amelioration, what are the requisites for augmenting the well-being of a man and a woman isolated in celibacy? In the first place, the companion chosen for life, ought to enjoy perfect health. Men or women who, from interested motives, take to themselves ailing or decrepid partners, commit an act which, if general, would entail the degradation of future generations. Is *that* reasonable? Is it even natural?

After health, come character and disposition, which greatly depend on education, habit, and the social medium in which the early years of life have been spent. It is certain that a girl brought up as a recluse, in the practice of almost monastic habits, will be ill disposed for an abrupt transition from her accustomed solitude to the activity of a large industrial enterprise. In like manner, the girl who has acquired a taste for travelling, will with difficulty yield to the exigencies of a sedentary life. There ought therefore at least to be some analogy between the past and the future, to prevent the suddenness of the contrast from turning out a stumbling-stone for the future spouses. As to the money question, no one says that it ought to be neglected; but certainly it ought to yield the precedence to physical and moral considerations.

Swedenborg has discoursed at length on the mysterious and almost invincible predestination of human attachments. Every soul, he asserts, and everybody, living and suffering in this valley of tears, has a sister or a brother, to which the laws of physical and moral attraction are constantly tending to unite it. In proof whereof he cites the sudden and inexplicable sympathy which breaks out, at first sight, between two persons who did not even suspect each other's existence.

No one will deny that, in married life, one ought to try to love the woman one marries. Well; before our heart is opened to her, our eyes have been already smitten. By what? There's the mystery! Evidently beauty is a powerful stimulant of love; but do we not daily behold men captivated by women whom the majority of their male friends consider plain? This fascination is therefore owing to some secret cause which we obey without knowing what it is—a mysterious attraction which cannot lead us astray, if we will only follow it. Inclination is the daughter of sight; she is the offspring of an innate sympathy, inexplicable perhaps, but certainly indisputable. Consequently, the man who marries the woman who pleases him, is nearer to the truth than he who beholds his future bride only through the deceptive prism of her cash-box.

When a man is charmed by a woman, and excites in her a reciprocal feeling, there are a

thousand ways which the strictest morality cannot blame, and which prudery only would dare to condemn, of studying and becoming acquainted with the temper and habits of that woman. If, after due inquiry, the inclination still subsists, it is clear that there is compatibility of temper between them. In this respect, at any rate, the marriage of fools has an advantage over the marriage of sages. As to pecuniary considerations, it is needless to mention them at this point of the argument. The man who is reasonable enough not to marry a wife until he has previously loved and studied her, will be perfectly capable of deciding a question in which his own personal interest is concerned.

From all which, M. Thévenin concludes that a marriage of reason is an act of folly which can only turn out well by great good luck; whilst a marriage of inclination is the only reasonable one, when the future couple have prudence enough to put between the birth of their inclination and the conclusion of their union an interval long enough to assure them that their affection is likely to resist time and its perfidious revelations.

#### SPIRITS ON THEIR LAST LEGS.

WHEN rogues fall out, says the proverb, honest men come by their due. So, when tricksters begin to abuse each other, the poor dupes they have gulled come to their senses.

This is the crisis at which spiritualism has arrived. Mr. Home, who for a long time held undisputed possession of the spiritual field, has lately stigmatised the Davenports as "unmitigated humbugs," and the friends of the Davenports retort, through the medium of the *Spiritual Times* (price twopence weekly, advertisements two shillings a line), that Mr. Home is so notoriously jealous of every medium but himself, that he is utterly disqualified for passing a judgment upon any medium whatever, or himself into the bargain. Mr. Home has worked his entertainment out; the Brothers Davenport have been exposed, and denounced even by Mr. Home himself, and their mysteries have been left in the hands of a few obscure ignorant men and women, who find séance-holding more profitable, more pleasant, and much easier work, than the shoemaking, or bonnet-building, which is their proper vocation. In fact, spirit-rapping has come down to the level of fortune-telling, with this difference, that the rappers have a weekly organ through which to communicate their names and addresses to the public; while the old woman with the dirty pack of cards is obliged to prowl about areas, or trust to her private and confidential connexion with the servant-maids.

A little while ago the spirits demanded half a sovereign at the doors; now they are willing to perform first and make the collection afterwards, "leaving it entirely to you," and thankfully receiving the smallest donations. This is even a degree lower than the practice of the

gentleman who gave an exhibition of rope-tying on Epsom Downs on the Derby Day, but who declined to begin until we had "chucked in another fourpence to make up two bob." I am bound to say, however, that the performance was worth the money. The fellow tied and untied himself with as much security, ease, and celerity, as I ever saw exhibited by the Davenportes. And he did it all in the sight of his audience, without hiding himself in a cabinet, or going behind a screen.

The readers of this journal have heard a good deal about the spirits in their over-proof condition at the Hanover-square and other select rooms. Let me now give them a taste of the spirits, under-proof and very much reduced, in dirty little parlours in Holloway, and dingy back shops in the neighbourhood of Holborn.

I received an invitation to visit two celebrated mediums, who stood towards each other in the earthly relation of man and wife. I set out about two o'clock on a bright summer's afternoon, in company of a distinguished friend, for a certain rendezvous in the Kentish-town-road. We had not far to go, but the elaborate simplification of the numbers of the Kentish-town-road by the Board of Works (that body being then engaged in ranging the even numbers on one side of the way and the odd numbers on the other), rendered the finding of the rendezvous a matter of considerable difficulty. The lady at the stay-shop assured us that Mr. Ferguson did not lodge there; but she would be most happy to guide us to where he did lodge, if in her power. "What was Mr. Ferguson?" How were we to answer? How were we to describe the gentleman? As a medium, or as a dealer in spirits? Medium conveyed nothing to the staymaking mind, and the mention of spirits suggested the public-house. How many unlicensed houses in the Kentish-town-road we called at, inquiring for spirits, I don't know; but before we discovered the lodgement of Mr. Ferguson (at a chemist's), we had become objects of much wonder and some suspicion to the road generally.

At last Mr. Ferguson did lodge here. We found him in the chemist's back parlour, surrounded by the implements of amateur photography, and an odour of collodion. He was not the medium himself; but the medium was a friend of his, and he would be happy to take us to his house, which was in Holloway. Before leading the way, Mr. Ferguson took us in hand like so many photographic plates, and prepared us for receiving impressions. He and his friend the medium had once been materialists; but circumstances had occurred at a table one evening, which had served to convince them that there was more in heaven and earth than was dreamt of in their philosophy. Since then, Mr. Ferguson had seen wonderful manifestations from the spirit-world, and he had no doubt that we would see wonderful things that day, if we approached the subject in a candid spirit. With this exhortation we started for Holloway.

We had trusted implicitly to the topographical knowledge of our guide, the amateur photographer, but we found, at Holloway, that we had been leaning upon a broken reed. All he could do was to point to a dead wall, and say: "My belief is, that if we could go through this wall we should come upon the house directly." This was so obviously the weak-minded excuse of a fatuously foolish person, that it drew forth from us a muttered trio of maledictions upon our guide's head. In case this should meet his eye, I will not say what names we called him; but they were not complimentary.

There was nothing for it but to make inquiries, which, as our guide did not even know the name of the street in which the medium lived, was like taking an observation at sea in a pitch-dark night. As the medium and his wife are in the habit of advertising themselves every week in the *Spiritual Times*, I shall not betray any confidence if I mention that their name is Wallace. We asked for Wallace, spiritualists, at the police station. They were, to their honour be it said, not known to the police. We asked at public-houses, and, equally to their credit, they were not known there. At length we were informed that Mr. Wallace lived at number fourteen in a certain street. We called there, and, in answer to our summons, there came to the door a gentleman in high-lows and corduroys, with a wisp of bird's-eye round his neck: no coat or waistcoat, and jury braces rigged with twine. He was wiping his mouth with the back of his hand, which indicated that we had disturbed him at dinner. Was he Mr. Wallace? He was. Was he in the spiritual line? But it was needless to ask. Mr. Wallace, of number fourteen, was obviously a philosopher of the peripatetic order, devoting himself to fish or vegetables, according to the season. I fancy that when Mr. Wallace, of number fourteen, saw four individuals standing on his door-step, he was seized with a qualm of conscience about beating his donkey, and had a terrible thought of the Society for the Prevention of Cruelty to Animals. We were almost in despair, when, on turning into the next street, we espied the postman. Here was a chance at length—our last and only chance.

"Did he know a Mr. Wallace living thereabouts?"

"Wallace—Wallace." This in a thoughtful and recollecting manner.

We assisted the postman's mental process by mentioning Mr. Wallace's profession—spiritualism. The word brought the scattered rays of the postal intelligence into focus.

"Oh yes; there was a Mr. Wallace living in the next street, at number forty-seven; to be sure, he *was* connected with religion, and received a great many letters."

I made a small bet that this was not the Wallace we were in search of—and lost.

The house was semi-detached, and the walls, which had been last plastered probably about forty years ago, were dirt-begrimed and cracked.

The neglected piece of ground in front should have been overrun with grass, but none grew there. The door stood in a gloomy little corner at the side, and close by there grew a strange-looking tree, suggestive of upas and deadly nightshade.

Mr. Ferguson, very fussy and very anxious, giving our mental plates another sensitive bath as he leads the way, ushers us into a dingy little parlour, the prominent articles in which are two round tables, one large and the other small, the latter with one leg and three feet. Mr. Ferguson tells us amazing stories about the large table. How, on several occasions, it was by spiritual agency lifted up nearly to the ceiling, and how he, Mr. F., got on the top of it, and could not bring it to the ground. We were introduced to the male medium. He was a tall man with a big bulging forehead, bushy eyebrows, a weak quivering mouth, and a pair of large watery dreamy-looking eyes. He was dressed in a swallow-tailed black coat, and his general appearance indicated the jobbing shoemaker who would preach in the Parks on Sunday afternoon if the police would let him, and who, if he were not permitted to preach, would be sure to find some other way of giving vent to his egotism and his dangerous little bit of learning. He was the kind of man who takes up with Voltaire and Tom Paine—who, under certain other circumstances, would be attracted by the purest Evangelism, by Puseyism, Mormonism, or any other ism—a man whose mind is as soft and impressionable as putty, and whose nerves are as weakly strung as a spider's web. Recognising a remarkably pulpy man of this type, I could give him credit for believing anything. I will candidly admit that he did not give me the idea of a trickster.

There was no sign of preparation about the humble little room, and I was abundantly convinced that there *was* no preparation. We were asked which table we would like to operate upon, the large or the small one. We were quite indifferent, and the choice being left to the medium, he chose the small table. Six of us, including the medium, sat down at it in a circle, and placed our hands on its surface. Thus we sat for fully five minutes, and nothing came of it. The medium said he had never known the spirits so backward. We sat for another five minutes without any result, when suddenly the door opened softly, and the medium's wife stole into the room. She took a seat on a chair near the door at some distance from the table. Mrs. Wallace presented a very striking contrast to her husband. She had a sharp cunning look, with a lively twinkle in her small dark eyes, indicating a strong sense of humour. At last we had a manifestation. The spirits did not rap and the table did not tilt, but the medium's hand began to waggle about in a sort of frenzy. "What was that?" we asked. "Oh, that was a sperrit moving him." "Could he see the spirit?" "Yes, he could see the sperrit." "And what did the spirit indicate?" "The sperrit indicated that he was to write."

Mr. Ferguson here brought forward a sheet of foolscap and a pencil, and the medium prepared to write. But it was a hand with St. Vitus's dance. After much staggering about the paper, the hand succeeded in writing a few words in very irregular characters. The medium said he could not make out every word that the spirit had written, but the purport of the communication was, that *she* was to come to the table. She? There could be no dispute about the person referred to; for there was only one she present. Accordingly, Mrs. Wallace (having, as I noticed, previously wiped her fingers with a handkerchief) came to the table. Still no raps, nor tilts, but presently Mr. Wallace's hand in another fit, moving backward and forward, and apparently sweeping crumbs into my lap. (N.B. I had just assured Mr. Wallace that I had never before assisted at an exhibition of spiritualism in this form.) "What did the agitated hand mean by sweeping imaginary crumbs into my lap?" It meant that Mrs. Wallace was to come and sit by me. "How did he know that?" "The sperrit told him so, and he knew by experience how the sperrit indicated particular things." "Oh," we said. Mrs. Wallace came and sat by me. She wiped her hands again before putting them on the table. Presently the table creaked. That was not sperrits, Mr. Wallace said: it was merely the creaking of the table, and he warned us not to be too ready to accept false signs. Presently a rap of another kind was heard. It was a dull sound like the rap of a knuckle on a solid piece of wood. That was declared to be a sperrit. Mr. Wallace proceeded to address the sperrit in mild and persuasive accents. "Now, friend; if you are ready to communicate with us, you will please to give three raps for 'yes,' and two raps for 'no.' Is it your wish to communicate with us? Give me a hanser." The spirit understood Mr. Wallace's dialect, and gave him a hanser with one rap, then another, and at length, after some delay, a third.

While these raps were being made, I noticed quite distinctly and visibly (without the possibility of making any mistake about the matter) that Mrs. Wallace was vigorously using the muscles of her fingers to move the table. When I had seen her in this way produce several raps, I came to a tacit understanding with her by wiping my fingers with my pocket-handkerchief. She saw me do this, and it was a masonic sign by which she recognised a medium of her own class. By exerting the tips of my fingers on the surface of the table, I found I could produce the raps that were recognised as the communications of spirits. I will explain at once how it is done, so that any one may test the matter for himself. By pushing the tips of your fingers backward and forward you give to the table an imperceptible motion which moves the foot on the floor. It is this slight slip on the floor that sounds through the boards and produces the raps. There was a rapid succession of knocks produced by Mrs. Wallace (not by me),

and then the male medium addressed the spirits thus: "Now, don't all knock at once, but be patient, and speak one at a time; you'll all have your turn." The spirits, thus rebuked, retired all but one, who was very willing to answer questions, but unfortunately always answered wrong. This spirit could not be persuaded to give a plain straightforward answer; but would go gabbling on with any number of knocks when he was required to give only two or three. On trying to bring this spirit under control, I found that the table slipped too readily, and that it was difficult to stop the raps at the required number. The medium tried another modus. Addressing the loquacious spirit, he said, "Will you hanser questions by tipping the table—three tips for yes, and two tips for no." The table tipped three times, signifying that it would hanser the questions. I distinctly saw Mrs. Wallace tip the table by drawing it towards her with her fingers. I stopped her at will; and I noticed that she could only tip the table when it was balanced upon two feet. When she wished to vary the direction in which the table was required to tip, she moved the table round either to the right or the left. The spirits answered readily with the tips; but oddly enough, they were *always* wrong. I never saw guess-work so uniformly a failure.

A more miserable, wretched, stupid, weak-minded imposture, it never has been my fate to see. I think Mrs. Wallace was sensible of her failure to impress us with the tapping, for it seemed in a sort of desperation that she resorted to the hand manifestation. While her hand was dancing St. Vitus's dance, she snuffled and soffed, and appeared to be in a fit. Some one making a funny remark while she was in the midst of this performance, she burst into a laugh in spite of herself, and St. Vitus left her instantaneously.

For the extraordinary scene that followed, I am in no way responsible. I was not privy to the design, and I was as much astonished and perplexed as the mediums themselves. One of the party asked a question with solemnity and anxiety. Mrs. Wallace, in the usual manner, tipped the table three times, and (this I will grant), with my assistance, sent it spinning into the questioner's lap. Hereupon the gentleman covered his face with his hands, sobbed, howled, kicked over the tables and chairs, seized the medium by the collar, dragged him to the ground, and there rolled over and over with him, apparently in a struggle to the death. All this time—and the gentleman manifested during full five minutes—Mr. Ferguson was adorning the spirit, by all sorts of sacred names, to "come out of this man." But the spirit did not come out of this man until every article of furniture in the room had been upset, and until Mr. Ferguson's shins had been well kicked, and the male medium nearly strangled. What was the object of this manifestation I don't know, unless it was to add force to the verdict which

we unanimously passed upon the performance of "Mr. and Mrs. Wallace, the celebrated mediums," which was, that their so-called spiritualism was an impudent, barefaced imposture, clumsy in the last degree, and audaciously blasphemous. We accompanied this finding with a honorarium of two shillings a head, making in all sixteen shillings. Not a bad afternoon's wage for such work.

That Mrs. Wallace practised the imposture knowing it to be an imposture, I am certain. I am not so sure about her husband. I am inclined to think that he believed in it to some extent; that he was in some measure the dupe of his wife; but that he was not unwilling to practise trickery himself when what he believed to be spiritual influence failed.

I made an appointment to witness a séance conducted by another famous medium; but on arriving at the place of meeting, I encountered my old friends, Mr. and Mrs. Wallace. The other famous medium, it was said, had *reasons* for not keeping the appointment, and had sent Mr. and Mrs. Wallace as substitutes, that a stroke of business might not be lost to the fraternity. This is organisation, I suppose. The second séance with the Wallaces was even more stupid than the first. They could do nothing but tilt the table, and when I asked (mentally) if Mr. Wallace was a humbug, the spirit tilted yes; and again tilted yes when I asked if Mrs. Wallace was not the greater humbug of the two. It occurred to me to inquire how these people could so constantly subject themselves to exposure, and persist in a foolish exhibition which I and others there present had already denounced. I had a full answer to this when I made a motion of leaving without paying. Both mediums stopped in the middle of their conjurations, and looked round at me with an unmistakable demand for money. Which is the root of all evil.

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